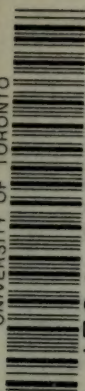


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Descartes, Spinoza

and the New Philosophy

By James Iverach, M.A., D.D.

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Descartes, Spinoza and the New Philosophy

By

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"Theism in the Light of Present Science and Philosophy" etc.*

Edinburgh. T. & T. Clark

1904

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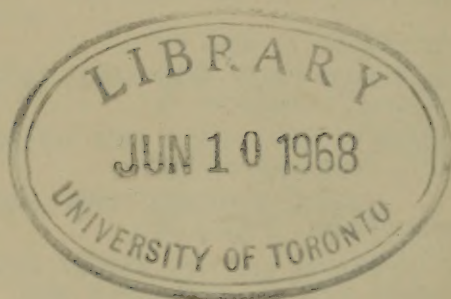
Printed by
MORRISON AND GIBB LIMITED,

FOR

T. & T. CLARK, EDINBURGH.

LONDON : SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO. LIMITED.

NEW YORK : CHARLES SCRIBNER'S SONS.



PREFACE

THE aim of the series of which this book is a part has prevented me from the discussion of many topics which might have been profitably treated, had more space been available. I felt, also, that each of the great thinkers treated in the book might have fitly claimed as large a space as that allotted to the two. There was therefore need for condensation, and for the laying of emphasis on the main thoughts of the systems, to the neglect of less important matters. I venture to hope that the great contributions of these great thinkers to the inheritance of the human race have been recognised in these pages. It has been necessary to neglect, almost altogether, the more theological part of Spinoza's writings, and the main part of his political philosophy. Those interested in Spinoza will find the political side of his philosophy set forth at length, with great learning, and with lucidity and precision, in the work of Mr. Duff (*Spinoza's Political and Ethical Philosophy*, by Robert A. Duff, M.A.; Maclehose, Glasgow), a book which came into my hands too late to be of service to me in the preparation of the present volume.

The edition of the works of Descartes with which I have worked was printed at Amsterdam in 1663. It contains the chief works of Descartes: the *Meditationes*, with the Responsiones to the various objections; the *Epistola ad Vætium*; the *Principia Philosophiæ*; the *Dissertatio de Methodo*; and the *Passiones Animæ*. While the date on the title-page is 1663, some of the treatises bear the number of the year 1664. The edition of the *Epistolæ* used by me is the Amsterdam one, printed in two volumes in 1682. The title-page says that some of these epistles were written by the author in Latin, and some in French, but these have been translated into Latin. It is not easy to remember all the books on Descartes and Cartesianism which I have read. I have obtained something from all of them. I have read the Histories of Philosophy. Ueberweg, Erdmann, Kuno Fischer, Windelband, and Höffding have been read by me, and they help the student greatly in his endeavour to understand the historical conditions of the time of Descartes and Spinoza, and the part which these thinkers played in the development of human thought. I have used the translation of Professor Veitch where it was available. The volume on *Descartes* in Blackwood's Philosophical Classics for English Readers, written by Professor Mahaffy, Dublin, I have found to be most helpful, especially in the biographical part of it. Other works to which I am indebted are referred to, and my specific indebtedness is acknowledged in its proper place.

The edition of the works of Spinoza with which I have worked is the magnificent Bi-centenary Edition, edited by Van Vloten and Land. It is an edition which leaves nothing to be desired. Most of the literature connected with the bi-centenary celebration of Spinoza has been read by me. Much of it is of the ephemeral sort. But the books on Spinoza written by Principal Caird, Dr. Martineau, and in particular the great work of Sir Frederick Pollock, have an abiding value. To each of these I am deeply indebted. Each of them has his own point of view, and each is disposed to interpret Spinoza in his own fashion, and, in particular, to criticise him from the point of view of his own philosophy; yet there is in all of these writers, and in their writings, something impersonal and objective. These works are simply indispensable to the student of Spinoza.

Another work which I have found most helpful is *A Study of the Ethics of Spinoza*, by Harold H. Joachim; Clarendon Press. It is a great work, but one not easy to read. Mr. Joachim has a non-conducting style, yet he has something to say; and if the reader has to wrestle with the meaning, there is a worthy meaning to be obtained, and it is well worth the toil it costs to find it. The classical article on Cartesianism in the *Encyclopædia Britannica*, by the Master of Balliol, is still one of the classics on the subject, and is as fresh and suggestive as ever. I have found many helpful and suggestive thoughts in the

references made to Spinoza and Descartes in Dr. Ward's Gifford Lectures, entitled *Naturalism and Agnosticism*.

I ought also to refer to the work of the late Professor Adamson of Glasgow, edited by Professor Sorley. It is called *The Development of Modern Philosophy*. I regret that it did not come into my hands at an earlier period, but my book was nearly finished before I had the advantage of reading his most able exposition of Descartes and Spinoza. To the work of Mr. Duff I have already referred. I have frequently used the translation of the Works of Spinoza, by Mr. R. H. M. Elwes, entitled "*The Chief Works of Benedict De Spinoza*, Translated from the Latin, with an Introduction by R. H. M. Elwes. In two Volumes. London: George Bell & Sons." It is a useful and competent work, and the English student of Spinoza will find it to be a great boon.

It seemed necessary to write this short preface, mainly for the purpose of acknowledging my obligations. There may be obligations which I have forgotten, but what I am conscious of, I acknowledge.

CONTENTS



INTRODUCTION

	PAGE
The Middle Ages—Their Attitude to History—Contrast between Greek and Latin Theology—The Mediæval View of God, Man, and the World—Truth guaranteed by Authority—Results of that Attitude of Mind—The Problem of the New Philosophy—Inner Experience and the Church—Augustine—Certainty of Inner Experience, and its Function in the Middle Ages—Conflicting Tendencies—Aristotle—The Influence of Greek Literature—The Rise of Individualism—The Rise of the Historical Spirit—The Influence of Geographical and Scientific Discoveries—The New Knowledge—the Movement of Emancipation	1

CHAPTER I

The New Situation—The New Problems—The Problem of Existence— The Problem of Descartes —The Family of Descartes—His Birth—His Early Years—His Training—Study of Mathematics and Physics—His further Studies—His Military Life—The Crisis of his Life—Travels—Intercourse with Scientific Men—His Works—Residence in Sweden—His Death	21
--	----

CHAPTER II

Discontent of Descartes with the Knowledge of his Time—His Account of that Knowledge—His four Rules for Guidance—The Method of Mathematics—Analysis and Synthesis—Specimen of Synthesis—Extension of Mathematical Method—The Question of Descartes and the Question of Kant—Nature and	
--	--

Limits of Human Knowledge—The Data of Intelligence— The two Methods—The Search for Certainty— <i>Cogito, ergo sum</i> — Clear and distinct Knowledge—Questions raised by the Cartesian Philosophy, and the Answers to them	37
---	----

CHAPTER III

The <i>Cogito, ergo sum</i> —Its meaning for Descartes—What is Thought? —Certainty of Intuitive Truth—Appeal to the Veracity of God —Need of such Appeal, in regard to Intuitive Truth and to the Perception of External Things—Space and Matter—Mind and Matter—Argument for the Existence of God—Dualism—Reality and Perfection—Objective Reality—The <i>Lumen naturale</i> — Causality—The Place of the Conception of God in the Cartesian System	56
---	----

CHAPTER IV

The Steps of the Argument for the Existence of God—The Know- ledge of Self gives the Knowledge of God—The Notion of the Infinite a Positive Notion—Reality not explicable from the notion of Contingent and Possible Existence—What the Con- ception of God is—Truth and Error—Understanding and Will —Final Cause rejected—Relation of God to Mind and to Matter —Cause and Effect—Reason and Consequent	74
---	----

CHAPTER V

The Two Sides of the Cartesian Philosophy—Mechanism—Animal Automatism—Huxley—Soul and Body—Parallelism or Inter- action—Passion—Freedom—A Conscious Automaton—Sensa- tion and Passion—Teleology—Modern Forms of the Cartesian Doctrine—Dr. Ward	92
---	----

CHAPTER VI

Matter—Matter and Motion—Quantity of Motion—The First and Second Causes—Matter in abstraction from Mind—Matter and Extension—Professor Tait on Newton's Laws of Motion— Criteria of Objective Reality—Development of the Universe according to Natural Law—Mechanical Evolution—Conser- vation of Matter—Difficulties connected with the System— Fruitfulness of the main Mechanical Conceptions of Descartes	111
---	-----

CHAPTER VII

PAGE

Problems of the Cartesian Philosophy—The Place of Malebranche— Spinoza—His Personality—The Poetry of his System—His Character—His People—The Aim of his Philosophy—His Birth —His Training—The Influences which moulded him—Separa- tion from Judaism—Friends and Correspondents—Residence at Rhynsburg and at Amsterdam—His Works—His Manner of Life—His Death	130
---	-----

CHAPTER VIII

<i>De Intellectus Emendatione</i> —The Search for a Method—The Rules of Method—True and adequate Ideas—Ideas and Abstractions —Definition—The Understanding—Properties of the Under- standing—General Laws—The Order and Connection of Ideas, and the Order and Connection of Things—Causality—Hume— Degrees of Knowledge—Perfect Knowledge	149
--	-----

CHAPTER IX

Exposition of Cartesian Philosophy—A Synthetic Exposition <i>more</i> <i>Geometrico</i> —Definitions—Axioms—Propositions—The <i>Cogi-</i> <i>tatio Metaphysica</i> —Ways of Thinking—The four Kinds of Being —Affections of Being—The Necessary, the Impossible, the Possible, and the Contingent—Freedom of the Will—Time and Eternity—Good and Evil—The Attributes of God—The Nature of Man	167
---	-----

CHAPTER X

The <i>Ethics</i> —The First Two Books—Substance—God—Proofs of the Existence of God—Their Validity—Exclusion of Ethical Con- ceptions from Reality—The Indeterminate—Determination— Power and Activity—Modes—Unity and Difference—Freedom and Self-determination—Degrees of Reality— <i>Natura naturans</i> and <i>Natura naturata</i> —Freedom—Teleology—Substance, Attri- butes, Mode—Dr. Ward on Teleology	186
---	-----

CHAPTER XI

Application of the Principles of the System to the Life of Man— Reply to the charge of Atheism—Definitions— <i>Res Cogitans et</i>	
---	--

	PAGE
<i>res extensa</i> —The adequate Idea—Kant on the Question, How Things are given us—A Science of Nature—Properties of Matter—Parallelism—Association of Ideas—Knowledge—The three Kinds of Knowledge— <i>Sub specie æternitatis</i> —Will and Understanding—Will and Desire	205

CHAPTER XII

The last Three Books of the <i>Ethics</i> —The <i>Conatus sese conservandi</i> —Its Meaning and its Consequences—Pleasure and Pain—The Primary Emotions and their Derivatives—Description and Appreciation—Ethical Judgments illusive—Good—Utility—Timeless Causation—The vanishing of Emotion—Social Ethics—The State—The third Kind of Knowledge—The Intellectual Love of God—Immortality—Peace, Blessedness, and Virtue	224
INDEX	243

DESCARTES, SPINOZA, AND THE NEW PHILOSOPHY

INTRODUCTION

The Middle Ages—Their Attitude to History—Contrast between Greek and Latin Theology—The Mediæval View of God, Man, and the World—Truth guaranteed by Authority—Results of that Attitude of Mind—The Problem of the New Philosophy—Inner Experience and the Church—Augustine—Certainty of Inner Experience and its Function in the Middle Ages—Conflicting Tendencies—Aristotle—The Influence of Greek Literature—The Rise of Individualism—The Rise of the Historical Spirit—The Influence of Geographical and Scientific Discoveries—The New Knowledge—The Movement of Emancipation.

To understand the New Philosophy, and to have some measure of its significance, it is necessary to obtain some conception of the state of life and thought during the period of its preparation, and of the conditions which so far determined it. Some account, however brief, must be given of the thought of the Middle Ages if we are to understand the problem of Descartes, and the solution of it to which he came. For, how-

ever great is his originality, he was still a child of his time, and the culture of the past and the circumstances of his time determined in a measure the questions asked by him, and the answers he was able to give them. It was a time of transition, when the old view of God, of man, and of the world could no longer satisfy the inquiring mind. Man's knowledge had suddenly widened. He had become aware of a culture and a mode of life different from his own, and the literature of Greece and the life of antiquity had been thrust upon him, and that knowledge had raised many questions which had a close bearing on his view of the world.

As one reads in the literature of the Middle Ages, one is struck with the absence of any knowledge of any kind of culture and life save that which lay in the immediate present. There is hardly a reference to history, and the Middle Ages seem ignorant of the origin of the religion they professed and of the historical and human conditions of its development. Such inquiries, if they ever occurred to any one, were sure to be discouraged by the Church, for the aim of the Church was ever to encourage faith in the divine origin and character of her claims. As much knowledge as would harmonise with these claims was permitted, and no more. If one had time, an instructive contrast might be drawn between Greek and Latin theology, regarding the views set forth in them as to the relation between the Christian and the heathen worlds. Greek theology delighted to find points of contact between the highest Greek thought and Christian theology; for the Middle Ages an impassable chasm lay between the pagan and the Christian worlds.

From the time of the separation of the Eastern and Western Churches there was little intercourse between them, and each proceeded on its own path of development. The Western Church and the Western nations were scarcely touched with any culture, and were little influenced by any outside forces. They unfolded their own dogmas; the nations lived their life, fought their battles, and pursued their destinies, unaware of the fact that men had lived on the earth for a long time, and had achieved something of worth during the past ages of the world.

The system of the Roman Church and of the Roman world was bound up with a limited view of the world and with a partial view of man. Looking back at the course of development from the time of Augustine, the great teacher of the Western Church, to the time of the Renaissance, we observe that the content of ancient human achievement, which was alive and fruitful in the Middle Ages, was just as much of it as was embodied in the doctrines of the Christian Church, and approved of by ecclesiastical authority. No doubt there was much in the doctrines that could feed the human spirit, and fit it for a right kind of life. But the attitude of mind that questions, scrutinises, doubts, and longs for certainty, the spirit that seeks for truth and wants a rational guarantee for the truth of thought, was discouraged until it almost vanished. Truth was given—it was guaranteed by revelation and made sure by the authority of the Church; the dogmas were not to be questioned; the whole duty of the inquirer consisted in showing the inner harmony and logical connection of the dogmas each to each, and to arrange them in a system. Here, too, was abundant work

for ardent spirits; and how great was the intellectual power exercised in this work, and how subtile were its speculations, are well known to the reader in scholastic philosophy.

It is not necessary to regard the Middle Ages as a period of utter darkness, nor as a period conspicuous by the absence of the power of thought or of speculation. The thought of these times was a thought within limits. It was not a time when men allowed themselves to search for the foundations of their beliefs, nor to inquire into the validity of their fundamental thoughts. The main strands of their thoughts were there, given to them; their truthfulness was guaranteed to them by the authority of the Church, and, for the most part, no one ever thought of questioning their truth or validity. These dogmas might be of such a character as to startle human intelligence, they might in their essential nature be such as to pass the limits of human intelligence, but that fact was regarded as a testimony of the ineffable character of the source from which they flowed. It is evident that the habit of looking at truth as given, as a something to be implicitly accepted and believed, must be productive of a peculiar habit of mind. It will develop, on the one hand, great analytic keenness of thought in the unfolding of the contents of a thought or a dogma, the truth of which is accepted as unquestioned; and, on the other hand, it will help to starve and paralyse all these aptitudes of the human mind which are fostered by synthetic work. In such circumstances knowledge tends to become merely verbal, and such was largely the wisdom of the Middle Ages.

After all, perhaps, as a training-place for the human

spirit at that stage of its development, no fitter school could be found than that of the Church, with her unity, her organisation, her teaching, and her authority. The limitations of her own culture, and the stern way in which all that was opposed to her life and doctrine was excluded, rendered her task of education more easy. The positive elements of truth in her creed, on which she strenuously insisted, were of great importance for her educative mission. It was of great importance for the young nations of the West and North to have impressed on them a sense of the unity lying at the basis of things, and of a unity of purpose running through the ages. They had lived in isolated particularism; their thoughts of man and of the world and of God were such as to make it impossible for them to reach any oneness in any sphere. On the religious side polytheism had been their heritage from the past, and if they had ever had any glimpses of a divine unity these had been few and far between, limited to a few, and had been insufficient to raise them above the seeming multiplicity of the divine. To them the message of the Church, with its constant insistence on the divine oneness, was a revelation, and a deliverance. It is a gain to reach unity in any sphere of thought, and a gain of special significance to be able to think of the unseen as one, with all its phenomena in one hand, and ruled by one purpose. This gain was given to these young nations by the Church. It was an advantage, also, that it was given with unfaltering assurance of its truth; and the claim that this truth was one divinely guaranteed was of immense importance in making the people feel its truth, if they could not think it.

It was given to them in a most authoritative way. There is a stage of human culture, both in the individual and in the race, during which truth can be best given and received in this authoritative fashion. Not a spirit of investigation, nor of questioning, nor of search, but a receptive spirit ready to receive what is taught, to understand it, and to arrange it in systematic order was the characteristic of the Church herself, and it was the characteristic of the training she gave to the peoples under her care. She had much to teach them in all spheres of human activity. As we have already said, she had a message about God and His relations to man and to the world which was more excellent than any they had ever heard of, or conceived. She had to tell them of life and duty, of the present and of the future, of sin and salvation, and, if she had not then conceived or understood the full meaning of her message, she was able to give them what would help to mould their character and shape their life, and guide them onwards to the fuller national life of the future. The most fruitful way of looking at the Middle Ages is this of regarding them as the time of the educating of the European peoples for their future destiny. Themselves altogether unscientific, and only theological, the Middle Ages prepared the world for that modern view of the world with which science has made us familiar. The monotheistic character of the creed of the Church laid stress on the fundamental thought, that there was only one cause of all things; and that led to the further thought, that as there was only one cause so there was one method of working, and that all things were connected together according to law. The ongoing of the world

must in some way correspond to the oneness of the cause. Thus the monotheistic creed contained within itself the notion of a world of order, a world ruled by law, and this is the fundamental postulate of science.

It is not our purpose to trace the movements of thought in the Middle Ages, nor to dwell at length on the characteristics of that interesting and formative period. We desire simply to obtain such a view of them as will help us to understand the problem set to the new philosophy. It helps us to understand that problem when we recognise that all the knowledge which the Middle Ages thought they possessed rested on foundations that had never been looked at, on assumptions that had never been tested, and on pre-suppositions that had never been sifted. The material, also, which they were in possession of, as the subjects on which they were to philosophise, were most inadequate. On this I shall speak a little later. At present I say only that almost all that we call the sciences was not at their command, and what they called science was for the most part erroneous. Yet what marvellous subtilty of thought, what acuteness, what formal completeness of exposition meet us in the scholastic philosophy. A skill in drawing distinctions, a power of elaborating arguments, and a deftness in drawing conclusions from appropriate premises, meet us in their pages such as we scarcely meet anywhere else in the history of human thought. It is a pity, we sometimes think, that human faculty of so exquisite a sort should have been thus wasted. But were these powers wasted? Was the Greek effort spent in elaborating the mathematics of the conic sections wasted? Verily, it was not. Nor was the scholastic

effort wasted, though it produced so few measurable results. It was a discipline of the human mind, it was the preparation of the human mind, and helped to develop powers which could be profitably exercised in dealing with the material to be won by the scientific spirit in the ages to come.

The critical ingenuity, the argumentative power, and the analytic skill perfected in dealing with the scanty material at the command of the Middle Ages were ready for the work of investigating precisely these presuppositions which had remained unquestioned by them. They were ready also for the purpose of co-ordinating, systematising, and of dealing generally with the larger fruits of human experience, as that experience was enriched by the gains won by scientific effort. The Middle Ages may be said to have trained the mind of man for the greater and successful effort of the modern time.

But the service of the Middle Ages to the progress of humanity was not limited to the mere training of the mind of man in logical dexterity and precision. They had something which had no recognised place in ancient thought. They received from Augustine the two fundamental conceptions, which they elaborated in a remarkable way. One conception was the immediate certainty of inner experience, and the other was the conception of the Church. In his doctrine of the certainty of inner experience Augustine anticipated the method of Descartes. Doubt implied the existence of the doubter; for if I doubt, I know that I, the doubter, am. This was for Augustine the starting-point of all knowledge. He recurs to it again and again, and expositions of it occur frequently in his

works. His second great doctrine was the conception of the Church, and in that doctrine there lay the germs of full-blown Hildebrandism. The unfolding of Augustine's doctrine of the certainty of inner experience, along with the Christian estimate of the eternal worth of man, led the Middle Ages to make that advance on the thought of Greece which has only come to full fruition in the modern philosophical doctrine of personality. The inner life of man was the absorbing interest of the Middle Ages, controlled only by the interests and the authority of the Church. Nor were these two tendencies always consistent with each other. The interests of the inner life must be consistent with the larger interests of the Universal Church. To the Greek the interest of the inner life was limited to its relation with the outer life of the world, and specially to the relation to the life of the State. But to the Middle Ages had come the conception of the Church with its far-reaching power, and its claims to control the life that now is, and that which is to come. No doubt the eternal fate of a man was determined by the character of the inner life. No doubt, also, the future depended on the growth of the inner life. While this conviction swayed the whole religious life of the Middle Ages, it was controlled by the other conviction that the inner life could flourish and grow only as it was fed, guided, and controlled by the larger life of the Catholic Church. The Church would not permit the inner life of man to grow after its own fashion. Hence the watchfulness of its attitude with regard to the mystic tendencies of the time. Mystic self-absorption tended to withdraw men from the control of the Church, and to give them a relation with the Divine

not mediated by the Church, and consequently it was discouraged and, if necessary, condemned. Mysticism was allowed, but only so far as it was consistent with the interests of the Church. Still, the fact remained that, whether directly or indirectly, the human spirit believed that it had fellowship with the Divine, and that fellowship could only be maintained through the growth of the inward life. Inner experience led men to see that the spiritual world was as much a reality as the material world.

Man grew accustomed to look at himself from an eternal point of view. He was able to place the rich contents of the inner life, enriched as it was by a great religious experience, over against the external world, and thus a way was prepared for a more thorough scrutiny of that larger world which would include in itself these aspects of reality. The stress laid on the reality of spiritual experience, and the emphasis laid on the continued existence of the man, were elements in the education of man of quite unique value.

Just as in the inner life of experience regard was ever had to the authority of the Church, so in the development of mediæval thought the Church had a ruling influence, and every tendency that seemed to oppose her doctrine was sternly repressed. It is not necessary to follow the course of development, nor to enter into the controversy between Nominalism and Realism, nor to take sides as to the primacy of the Will or the Intellect, nor to say anything as to the boundaries of the kingdoms of Nature and of Grace, on all of which a great deal was written in the Middle Ages. Nor need we look at the contests between Church and State as these were conducted in the nations of

the West. Nor can we say anything on the ethical problems keenly agitated from time to time, which are not without interest and significance to-day.

Something must be said, however, on the relation of the Church, with her beliefs and practice, to the world of nature, and how she dealt with the views of the world which came to her largely through the Arabian philosophy, and finally through the recovered works of Aristotle. It is curious to reflect on the position which Aristotle came to hold in the Catholic Church, and still holds. Of course, the teachings of Aristotle must be made to agree with the presuppositions of the Church. A study of the works of Aristotle, as we now have them, reveals the fact that it would need great ingenuity to reconcile them with the dogmas of the mediæval Church. As a matter of fact, they were not reconciled. They are mostly side by side, and are not mediated at all. The monism of Aristotle becomes a dualism in the hands of the schoolmen. In fact, all along the line a criticism of the scholastic philosophy reveals the fact that there is a fundamental difference between the Aristotle of Greece and the Aristotle of the schools. But even the philosophy of the schools cannot be made consistent with itself, for what they take from Aristotle is in contradiction with their own presuppositions. But the scholastic philosophy had a rooted objection to any process of investigation which might lay bare the foundations on which the edifice of their thought was built up.

The principles borrowed from Aristotle, even as modified by the scholastic philosophy, contained elements which in the long run were certain to exercise a disruptive influence on the composite structure. The

explosion was destined to be all the more destructive the longer it was postponed. It came at last, and it was all the wider in its range because the principle of authority itself was involved in the crisis. If a system based on authority is ever questioned, and if men are driven to doubt the sufficiency and adequacy of the system, it is not the system alone that is overthrown; the principle of authority also is likely to be questioned. This was the result as regards the system of mediæval thought, which ceased to commend itself to many peoples because of the movement we call by the names of the Renaissance and the Reformation. The Church had debarred men from any investigations of her presuppositions. It committed itself to the truth of the system. It is perilous to the very interests of authority to commit itself to propositions open to question. Authority has often tried to stop the process of investigation, and it has always failed, and deserved to fail. No doubt authority has its legitimate sphere of influence, but it has no place in the ordered process of human knowledge, nor any right to step in between human knowledge and its goal.

Human knowledge increased by leaps and bounds, and every increase of knowledge made the rupture with scholasticism more inevitable. The scholastic philosophy contained in itself the seeds of its own dissolution, as the history of it abundantly proves. But the internal incompatibilities in its system of thought become more clear when the pressure of the new knowledge began to tell on it. The philosophy of the Middle Ages was not flexible enough to receive the new ferment which aroused the minds of men when they began to study the works of Greek thinkers

which were rediscovered in the fifteenth century. A new stream of culture flowed from Byzantium, and, reaching Florence and Rome, speedily reached Germany, France, and England, and wherever it appeared it called forth a spirit of opposition to scholasticism. The knowledge of Greek at first hand caused students to be resolutely opposed to the mediæval interpretation of Greek philosophy; a knowledge of Greek method, with its criticism, made them impatient of a method of deduction from assumptions unverified, unsifted, and uncriticised, received from mere authority. The living beauty of Greek literature made men tired of the pedantic stiffness of monastic thought. In fact, in all departments of human thought, the restored Greek literature was like new wine with the proverbial influence on old bottles.

Still more, the quickening effect of that great literature was not limited to the effort to assimilate and to understand it. It quickened the minds of men, filled them with curiosity, and made them look at themselves and the world with new eyes. What is the world? and what is man? and what is man's position in the cosmos? Questions these which had an answer in the mediæval system, but these answers were soon found to be inadequate. Man began to discover himself, and began to claim the right to live his own life, to think his own thought, to work out his own systems, and work them out to their inevitable conclusions. The Church had claimed to rule the world, and to bind men. She gave them truth infallibly guaranteed, and human effort ought to be directed only towards its assimilation. But the Renaissance started from another presupposition. Man, the individual, sprang into view,

—man, in his immeasurable natural freedom, who had the right to live, and to live according to nature. So the Renaissance loved to dwell on man, his greatness, his glory, his genius, and his power. It had all the strength of a reaction against the repressive power of mediævalism, and all the riotous energy of being, freshly emancipated, and drunk with the sense of freedom and of power. It was the apotheosis of the natural man. It was, no doubt, extravagant, one-sided, and exaggerated; but it vindicated, once for all, the right of the individual to use his own eyes, to look at himself and the world for himself, and to face the problems of existence for himself. Happily, it is not necessary for our purpose to characterise the Renaissance, nor to appraise its achievement. It is done to our hands by many writers, so well known that we do not require to name them. The Renaissance is the first step towards the discovery of the individual, and when the individual is discovered we have taken the first and necessary step towards a discovery of society—a discovery which is yet to come.

The movement went on for some time before it became conscious of itself and its tendency. It was only by slow degrees that the Church became conscious of the fundamental opposition between her system and the new learning. Many things helped to prolong this period of unconsciousness. Many of high standing in the Church had drunk deeply of the spirit of the Renaissance. Further, many in the Church did not take the Church and her system seriously, and it took some time to bring the opposition into clear consciousness. It was in the domain of nature knowledge that the opposition became clear to both parties.

Once realised at any point, it soon became apparent that the new view of the world was opposed to the old at every point where they touched. To the Renaissance, history and a view of history as a real process in the world became possible. There was a life beyond the horizon drawn by the Church. As they studied the literature of Greece the men of the Renaissance felt that they had relations not only to the present; they were closely akin to the peoples of antiquity. To the Renaissance we owe the first beginning of the historical view of the world, which is the leading view of the science and philosophy of our time.

Along with the discovery of the history of the world in time went the discovery of the world in space. Men came to have a more adequate knowledge of the world in which they lived. Geographical knowledge had greatly widened. Through the Crusades, through the travels of such men as Marco Polo, through the discovery of America, through the discovery of the route to India by the Cape of Good Hope, and in other ways, man came to have a juster conception of the form of the world in which he lived. It was difficult to reconcile the larger geographical view of the earth with that which had been the authoritative teaching. But the issue was not clear. The new knowledge might be regarded as an extension of the old, and it was not felt to be in contradiction with it. But the issue became clear when the cosmical position of the earth, and its place and position among the other bodies in the cosmos, became a matter of knowledge. It was possible to widen the mediæval view of history and to find a place in it for the human race. It was also possible

to extend the geographical view so as to include the various seas and continents of the earth, without flagrant contradiction of the received view. But the geocentric and the heliocentric views of the earth could not be reconciled.

The naive view of the universe, as it appears to sense, placed the earth in the centre of the sphere, and made the planets revolve round it in circles. Not to touch on the systems set forth in ancient Greek thought, the Aristotelian theory of the world was based on the geocentric conception of the earth, and on the doctrine of the spheres. So great was the influence of the latter on human thought that even yet we hear of "the music of the spheres." The final form of the ancient theory is found in the work of the astronomer Ptolemy, elaborated in the second century of the Christian era. Into the particulars of the theory it is not necessary to enter. It suffices to say that the fundamental presupposition is, that the planets move round the earth, and that the earth is the centre of the universe. On this view it was gradually found impossible to make the facts square with the theory. New and more complex hypotheses were evolved to account for the facts; epicycles were heaped on epicycles until all thoughts of simplicity were lost, and it began to dawn on the people's mind that they were on a wrong track. Step by step a new conception took the place of the old; one step was taken by Tycho de Brahé and a greater step was taken by Copernicus, and the edifice was crowned by Newton, who was able to state in simple form the law that matter attracts directly as the masses, and inversely as the square of the distance. Newton was able to prove that the movements of the planets were con-

sequences of the law of gravitation. Nor should the name of Kepler be omitted from the list of those who, in this field, widened the bounds of human knowledge, and enabled men to have a view of the unity of the physical universe. It was a great work that was done in the sphere of astronomy. For it shows us the human mind going back on its earliest and most inveterate preconceptions, submitting them to a critical examination, and discarding them as delusions because they had ceased to give a true and adequate interpretation of experience. It is no wonder that Kant rejoiced to compare his own critical method with the method of Copernicus. The abiding lesson for thought is, that thought to be fruitful must reflect not only on its objects, but also on its own point of view, and must be prepared to criticise at frequent intervals its own procedure.

The bearing of this on the theory of the universe held and upheld by the Church was soon manifest. The dogmatic authority of the Church was involved in the maintenance of the mediæval view of the world. It had on its side the witness of the senses and the authority of antiquity. The teaching of the Church was identified in the closest manner with the system of Aristotle and with the Ptolemaic astronomy. Nay more, it seemed to have the authority of Scripture. "The two fit each other as scene and action: the earth, the centre of the world; the appearance of God on the earth; the Church, the CIVITAS DEI on earth, the centre of humanity; hell under the earth, heaven above it; the damned in hell, the saved in heaven beyond the stars, where the orders of the heavenly hierarchy ascend to the throne of God. The whole structure of

limited and local conceptions totters and tumbles as soon as the earth ceases to be the centre of the universe and heaven its dome" (Kuno Fischer, *Descartes and his School*, Eng. trans. p. 133).

Thus the opposition between the ecclesiastical and the Copernican systems was complete and thorough-going. As time went on and the new science grew from more to more, men on both sides became conscious of the breach. Yet, when one thinks of it, it was not a conflict between faith and knowledge, or between religion and science: it was a conflict between science proven inadequate, grown old and feeble, and science in its fresh youth and vigour. The pity of it was that the ecclesiastical system clung to that which was superannuated and treated it as of authority, and committed to it the issues of the present and the future. An untenable position was maintained by methods which might have a temporary success, with more fatal consequences in the time to come.

Of greater importance than the discoveries which had been made, and the wider knowledge which had been won, was the awakening of the human spirit, and the claim it made to look at itself and at the world apart from presuppositions, and with the strenuous determination to see self and the world really as they were. This is the very spirit of the New Philosophy. It did not begin with Descartes, though he was one of its chief exponents. It was present in the humanists; it ruled in Copernicus, Galileo, and the other precursors of the New Philosophy. There is no more interesting chapter in human history than this of the awakening of the human spirit to the greatness of man and the magnificence of the world. The ecclesiastical authority

was powerless to stem the rising tide. Science and philosophy claimed their rights, and in the long run they won the victory. If they won it at the expense of ecclesiastical authority, in the mediæval conception of it, they won it also to the lasting gain of real religion and true theology.

The right to look at the self and world apart from the presuppositions of the ruling system must soon be inevitably claimed also in the sphere of religion. The great deliverance was the work of religion. For the most part the great leaders in Humanism and in Science were content to let the ecclesiastical system alone. They were engrossed with their own work, and scarcely realised that they were in opposition to the system of the Church. The religion of the Middle Ages was to believe what the Church taught, to worship in the forms prescribed by the Church, and to obey what the Church commanded. But the movement of the human spirit, which in the sphere of thought had set it so far free from ecclesiastical dominion, soon penetrated into the sphere of religion, and with consequences of a revolutionary character. As in science men claimed to look at the world and at man apart from the presuppositions of the time, so in religion the claims to have direct access to God in Christ became urgent. Man claimed the right to salvation, and in the fact of justification by faith in Christ alone they found the truth which they needed. The Reformation returned to the sources of Christian faith and doctrine, and the reformers believed that they found in the Scriptures that help and guidance which the humanists had found in the new view of man and of the world. We do not dwell on this, the religious aspect of the great

movement. We refer to it, as the Renaissance and the Reformation are parts of that great movement of emancipation by which man passed into a new world, in which a larger life became possible, and more adequate conceptions of God, man, and the world became possible. Great movements affect all spheres of human thought and life, and the account of any aspect of them is inadequate if it is not conscious that no aspect can be understood by itself. Our present business is, however, not with the Reformation, but with the New Philosophy. After a long preparation, and after many precursors, the hour is come, and the man: the man who is to embody the spirit of the age, and in whom the spirit of the age is to come to a clear consciousness of itself.

CHAPTER I

The New Situation—The New Problems—The Problem of Existence—The Problem of Descartes—The Family of Descartes—His Birth—His Early Years—His Training—Study of Mathematics and Physics—His further Studies—His Military Life—The Crisis of his Life—Travels—Inter-course with Scientific Men—His Works—Residence in Sweden—His Death.

A NEW view of the world had been won, and new scientific knowledge had come in with a flood, and it was necessary to work these into a systematic form and to co-ordinate them with the truths which seemed to consciousness to be sure, clear, and indisputable; for the need of a system to replace the scholastic system, now fallen into disrepute, was felt to be obvious. The desire for a system, the longing for a principle, assured and certain, from which all else would flow as conclusions from premises, was itself a proof that the victory over scholasticism was not yet complete. But with the endeavour after a system there went a statement of problems, the solutions of which make up the history of modern philosophy. The problem of existence comes first into view, and along with it the problem of knowledge. As the new science had set forth the mechanical explanation of nature, so it had thrust into the foreground the problem of the relation

between the physical and the mental. Is the mechanical explanation adequate? or, is there room for the teleological as well?

All these problems and many others are raised in the works of Descartes. He belonged to a noble family in Touraine, a family which had attained to some prominence, and had done some service to the State. His grandfather had served in war, his father had been a counsellor of Parliament at Rennes. Some of his relatives had risen to a high position in the Church. In the character and circumstances of his family there was nothing to excite that spirit of inquiry, or that tendency to doubt and question every accepted opinion, which was one of the characteristics of Descartes. Rather, the easy circumstances and the opportunity of a useful and honourable career open to him, as it was to all the loyal nobility, might have predisposed Descartes to adhere to the established order of things. In fact, the members of his family did not approve of him, and his brother regarded him with contempt, even after his name was famous throughout Europe.

René Descartes was born 31st March 1596. His mother died a few days after his birth. From her he inherited a weak constitution and a tendency to consumption, the disease of which she had died. That he survived the weakness of infancy and attained to some measure of strength was owing to the tenderness and skill of a devoted nurse, whom Descartes ever held in grateful remembrance. He was treated, owing to his delicate health, with the greatest indulgence. Mental exertion was discouraged, and he was only allowed to play at lessons. His desire for knowledge was very strong, and his acuteness was so great that

his father was wont to call him his little philosopher. At the beginning of the year 1604 he was sent to the Jesuit College at La Fleche, recently founded by Henry IV. There he studied physics and philosophy according to the scholastic method. Mathematics was, however, his favourite study, and he seems soon to have made such progress as to have passed beyond the range of mathematical attainment of the time, and to be on the way towards the discovery of the principles of analytical geometry—the application of algebra to geometry.

The school owed its existence to the munificence of King Henry IV., who gave to the Jesuit order the palace of La Fleche, and endowed it with royal magnificence. A hundred of the youth of the French nobility were to be educated in it, and trained by the Jesuit fathers. Among the first pupils was Descartes, and he remained there till he had finished his course, which he did in his seventeenth year. Descartes was an eager, loyal, and ardent student. He easily mastered the studies taught in the school, and indeed passed beyond them. Those studies began with the ancient languages, then a two years' course in philosophy, comprising a course in logic and ethics, and a course in physics and metaphysics. The effect of these studies on the mind of Descartes, taught as they were then, was to make him question the assumptions on which the systems were based, and to criticise them out and out. They failed to satisfy his ardent desire for knowledge, and they provoked that doubt which, so far, set him free from the scholastic method and system. Mathematics was the only study that satisfied him. The certainty of its data and the demonstrative assur-

ance of its sequence spurred him on to further study. His aim even then was to attain to certainty, clearness, and distinctness of knowledge. What influence mathematics had on his thought, and through him on philosophy, will be apparent as we proceed. We shall quote his own account of his state of mind at the end of his course in school when we seek to describe his method.

In August 1612 he left school. "I," he says, "completely abandoned the study of books as soon as my age permitted me to leave the subordinate position of a scholar, and I resolved no longer to study any other science than that which I could find in myself or in the great book of the world." With this resolve firmly fixed in his mind he left school, and entered on the period of life in the world and as a soldier. He was intended for the army, but as he was far from strong he stayed for some time at Rennes, where he practised riding and fencing to strengthen himself and to prepare himself for his future calling. Then for a time he went to Paris, and plunged into the excitement of city life. But the tendency towards scientific study continued to dominate him, and suddenly he left companions and friends and lived for two years in a quiet lodging in St. Germain, hidden from friends and family. During this period of seclusion he was prosecuting his mathematical studies. Occupied in his mathematical studies, the stream of human events flowed on unobserved by him. The last States-General of the kingdom might meet and cease to meet, power might pass from the queen-mother to the king, the tendency which was to issue in the great event of 1789 might be set in action, but, absorbed in mathematics, Descartes

was unconscious of those movements. Drawn from his retirement by one of his friends, he resolved to see other phases of life than those which were open to him in Paris. He went to the Netherlands and entered into the Dutch service, under Prince Maurice of Nassau, then the foremost military school of the time. Even in the military camp at Breda he found leisure to attend to his favourite pursuits. He was still occupied with mathematics, and was interested in the mathematical problems which were posted on the walls, challenging any one for a solution. Not understanding the language, Descartes asked a bystander to translate the problem into Latin or French. On the second day he brought back the solution, and this was the beginning of intercourse with Beeckmann.

During his residence at Breda the controversy between Calvinist and Arminian grew to its height, a controversy which had echoes far and wide, and seems to have been as unnoticed by Descartes as were the contemporary events in France. Absorbed though he was in study, he yet felt that it was needful for him to become acquainted with the world of men. He desired to be an actor, and to feel the experience which action alone can give. In the camp of Breda scientific studies were so absorbing that they threw the active life into the background; he resolved to pass into a sphere in which the call to action would be irresistible. He went to Germany, then at the beginning of the Thirty Years' War. The great religious conflict which began with the Reformation was to be definitely fought out. An emperor had come to the throne who made it his life-work to stamp out the reformed religion. Beginning with a war for the possession of Bohemia, it passed

into a war for the existence of Protestantism. The interest of Descartes did not lie in the war as a war, nor did he enter into the large interests involved in that great conflict: it was valuable to him as a school of experience, as a storehouse of material for subsequent reflection. He served in the Bavarian army for a time, and subsequently in the imperial army. But the most significant event of the time for Descartes did not lie in the clash of arms, nor in the battles lost and won; it lay in the crisis through which he passed while he was in winter-quarters at Neuberg, on the Danube, in the winter of 1619-20. This was nothing less than the discovery of the method which guided him in all his work, mathematical and philosophical. Mathematics alone seemed to him to give certain knowledge. If he could find a method the application of which would give him the same sense of certainty in dealing with other sciences, he would be satisfied. For years he sought for this, and at length he believed he had found it. Of his exultation of spirit when he had the key of knowledge in his hand, and of his method itself, we shall read when we read his works. His works are rich in biographical interest. For him the events of life are his discoveries, particularly the discovery of his method, and his application of it, as he thought, to the sciences and to philosophy.

Some eight months after the great mental crisis through which he had passed he left Hungary, and his military career ended. He did not return immediately to Paris, but travelled through Moravia and Silesia, spent some time in Brandenburg and Pomerania, and finally passed by sea from Emden to Holland. It was his first visit to Holland, the place where he was to

dwelt so long. In March 1622 he returned to France. He went to Rennes to visit his father, who then put him in possession of his share of his mother's property. His inheritance was sufficient for him to live independently, and to set him free from that anxiety which has so often paralysed the best efforts of less fortunate men. He made no long stay at Rennes, as in February 1623 we find him in Paris. After a stay of two months there he returned to Rennes, and shortly set out on a journey to Italy. On passing the Alps he made some scientific observations, passed on to Innsprück, and thence to Venice, where he witnessed the marriage of a new Doge with the Adriatic. He made a pilgrimage to Loretto. He visited Rome, Florence, and, after witnessing the siege of Gavi, he returned by the valley of Susa and Piedmont to France, and resolved to settle for a time in Paris. In Paris he could find that scientific society which was the only sort of society in which he could find pleasure and satisfaction. He resided in Paris from the end of the year 1625 to the year 1628, interrupted only by an occasional visit to his relatives. He was present also at the famous siege of Rochelle, and during a truce visited the English fleet.

During this period Descartes made the acquaintance of many of those scientific men with whom he corresponded in subsequent years, and renewed his intercourse with old friends. Hardy, De Beaune, Morin, Desargues, Balzac, and others were among his friends, with whom he had much friendly and stimulating intercourse. His old friends Mersenne and Mydorge, then engaged in optical studies, were the means of directing his attention to those studies which eventu-

ally led to the writing of his *Dioptrics*. He gradually became the focus of a number of appreciative friends, and in his intercourse with them he gave the first expression to those thoughts which he had worked out in solitude and toil. His friends, surprised at their profundity and lucidity, urged him to publish them. He, however, preferred to brood over them still longer, and to wait for their further ripening. Some interesting stories regarding the triumph of his method belong to this period, but they are so familiar that we need not quote them.

The period of his wanderings had come to an end. He had made trial of all the knowledge of his time, he had seen the world, had visited many lands and many cities, and he had studied their thoughts and their opinions. He was able to detect the errors in commonly accepted beliefs, and his attitude towards almost all the beliefs of men was that of doubt and criticism. He was sceptical of all except mathematical knowledge. True, he had seemed to see that the mathematical method, or a method of similar stringency, could be applied to all knowledge, but the real work was yet to be done. He had made himself a master of the method which led to the detection of error; could he make himself master of a method which would lead to the discovery of truth? He remained silent about his travels, said nothing regarding his varied experiences in many lands; these were only valuable in so far as they had widened his experience of the ways and thoughts of men. They simply drove him back to face these unanswered questions which he saw lying at the foundations of all knowledge. These had always pressed on him since he began to reflect, and

they now returned with greater insistence than ever. He must be alone, and undisturbed even by his friends, in order to think them out. He was a living man himself, with a wide experience of life ; surely he might take himself as a representative man, subject himself and his thoughts to a searching investigation that took nothing for granted, that subjected everything to a doubt that did not falter ; thus he might hope to reach those principles which, like mathematical axioms, might be supposed to lie at the foundation of all knowledge. For this, however, a place was needed where he could be free from interruptions.

He sought for a place which had a climate suitable for him and his work, and in which he might be as solitary as he pleased. He thought that he could not find these conditions in France, he believed that both could be found in Holland. In the spring of 1629 he went to Holland. So resolved was he to free himself from the possibility of interruptions that he took leave of his family by letter, and bade a personal farewell to only a few of his Parisian friends. One friend attended to the business affairs of Descartes, another looked after his literary affairs, and he jealously guarded his precious leisure from every one else. He frequently changed his abode, and habitually sought out for his residence the least frequented places. During the twenty years of his residence in Holland he changed his habitation twenty-four times, so determined was he to be master of his time and of his work. With occasional returns to society, which for a time he could thoroughly enjoy, he returned with increased zest to his solitude and his work. It was thus that he thought out and brought to literary form these works

which have set those problems to philosophy, the solutions of which have occupied philosophic thought from that day to this! and so became the founder of modern philosophy.

It is not necessary, and would indeed be tedious, to enumerate the places where Descartes resided during the twenty years of his sojourn in Holland. For the most part the events of interest to him were not those that happened in the world, but those which culminated in the working out of his thought, its reduction into literary form, and the publication of his works. The subjects at which he worked were of immense range and of abounding and permanent interest. The first effort resulted in the sketch of the *Meditations*, which was completed in the year 1629. He then set himself to the preparation of a comprehensive work, in which there would be a systematic explanation of the world according to his new principles. His first aim was to discover a method whereby real and progressive knowledge might be won by man. By the use of this method he hoped to arrive at a true metaphysic, and by the further application of it to reach true and adequate conceptions of man and the world. But the order of his discovery was not the order of their publication. Assuming the truth of his method and principles, he set himself to their application, and if the application of them were accepted he believed the way would be prepared for a favourable consideration of the method and principles themselves. With this view he gave himself to the preparation of the treatise on the *Cosmos*. In the main assumption, which lies at the basis of his system, he so far anticipated the nebular theory with which are associated the names of Kant

and Laplace. A homogeneous matter, with only the qualities of extension and mobility, and from these the phenomena of the world are to be deduced. A fixed quantity of matter, and a constant quantity of motion being given, then from these data the world can be explained. He laboured at the work and got it into literary shape, but he did not publish it. As he was about to publish it he heard of Galileo's book on the same subject, and he learned of the commotion which that book had caused, and it gave him pause. He heard that the doctrine of the motion of the earth round the sun had been condemned, and that Galileo had been somewhat roughly dealt with by the Holy Office. Some time after he received from Beeckmann a copy of Galileo's book, and finding in it many positions identical with his own, he was at a loss what to do. Having learned that the doctrine of the motion of the earth was not tolerated, he saw that if he was to publish his work he would bring himself under the condemnation of the Church. "I am like wicked debtors," he wrote to Mersenne, November 28, 1633, "who are always asking their creditors for more time, as soon as they see the day for payment drawing near. I had really intended to send you my *Cosmos* as a New Year's present; and about two weeks ago I was entirely resolved to send a part of it to you, if the whole should not be then copied. But I have just been inquiring in Leyden and Amsterdam whether Galileo's system of the universe can be there found, since I thought I had heard that it had been published in Italy the previous year. I am now informed that it was certainly printed, but that every copy of it was immediately burnt at Rome, and that Galileo himself

was sentenced to do penance. This has so strangely affected me that I have almost resolved to burn all my manuscript, or at least to show it to no one. And I am the more inclined to this resolution, because it at once occurs to me that Galileo, who is an Italian and, as I am informed, has been in favour with the Pope, is charged with no other crime than this doctrine of the motion of the earth, which, as I know, some cardinals had before pronounced heretical. But in spite of it, if my information is correct, it has continued to be propagated in Rome; and I confess, if it is false, all the principles of my philosophy are erroneous, since they mutually support each other; and it is so closely connected with all the parts of my work that I cannot leave it out without fatally injuring the rest. But on no account will I publish anything that might displease the Church, and I will rather suppress it altogether than allow it to appear in a mutilated condition" (quoted in Kuno Fischer's *Descartes*, pp. 231, 232). Descartes was not made of the stuff of which martyrs were made. He was afraid of opposition, specially of opposition proceeding from quarters that had the power and the will to make him uncomfortable. It was open to him to keep his book secret, but he did not altogether take the course. He did not keep the secret, he published his conclusions in a form which might possibly be distinguished from the form which had been condemned. "In words," he says, "I deny the motion of the earth, while in reality I defend the system of Copernicus." The peculiar example of Descartes, himself a pupil of the Jesuits, was followed by the Jesuit editors of Newton's *Principia*. The *Declaratio* of PP. Le Seur et Jacquier, prefixed to the second volume of the

Jesuit edition of the *Principia* is as follows: "Newtonus in hoc tertio Libro Telluris motæ hypothesim assumit. Autoris Propositiones aliter explicari non poterant, nisi eadem quoque facta hypothesi. Hinc alienum coacti sumus gerere personam. Caeterum latis a summis Pontificibus contra telluris motum Decretis nos obsequi profitemur." On the dexterity of this movement we make no remark. Authoritative decisions of an infallible authority have their inconveniences. Nor shall we make any remark on the timidity of Descartes, or on the compromise to which he came.

Having for these reasons resolved not to publish the *Cosmos* in the form in which he had prepared it, he turned to other work. But we do not propose to describe the preparation of his successive works or the order of their publication. The first work of his published is the *Discourse on Method*, or, to give the title in full, *Discourse on the Method of rightly guiding the Reason in the investigating of Truth in the Sciences; the Dioptrics, and the Meteors*. The book did not attract much attention. In fact, it was not till the *Meditations* were published that the world awoke to the fact that a thinker of the first magnitude had appeared on it. In the *Discourse* he had already revealed the main principles of his philosophy, and had discussed the necessity of universal doubt, the principle of certainty, the criterion of knowledge, the existence of God and of the soul. But these principles had only been stated; they required to be unfolded, elucidated, and established. He had thought out his system, and, in fact, the main ideas of his philosophy were widely known before they appeared in print. He had talked about them frequently with his friends in Paris and in

Holland; many had been attracted by these ideas and had talked about them in their turn; and the Cartesian philosophy had become a factor in contemporary thought before it was accessible in the writings of its author. In 1640 appeared the first edition of the *Meditations*. Copies of it had been given to several of those of reputation, of whom may be named Arnauld, Gassendi, and Hobbes; their criticisms and objections had been considered by Descartes, and along with his replies were published as an appendix to the original work. The *Responsiones* is longer than the original treatise, but they are of great value for the true apprehension of the meaning of the author. The *Principia Philosophiæ* was published in 1642. The only other work published during his life was the treatise on the Emotions, *De Passionibus*. It was written at the request of the Princess Elizabeth, a daughter of the unfortunate King of Bohemia. He kept up a correspondence with her, and in that correspondence he set forth his ideas about Ethics.

The publication of his system resulted in controversy. The New Philosophy found warm adherents and resolute enemies. His disciples were enthusiastic, and in the universities they began to advocate the system of their master. They roused opposition, they really invited attack, and soon the battle raged furiously. The conflict is of importance only historically, and need not detain us here. It may be said, however, that Descartes was attacked by Romanist and Protestant alike. The one accused him of heretical views, of an inclination to Protestantism, and even of taking part in Protestant worship; the other charged him with scepticism, atheism, and with holding opinions subver-

sive of the basis of State, of Church, and—as the controversy was keenest in university circles—of the University. Controversial literature is not of the most edifying kind, and a controversy in which merely local and transitory topics occupy so large a place may be left by us untouched. Hard blows were given and received, men shrieked in their wrath, appealed for sympathy and protection, as controversialists usually do; but the controversy has long fallen into silence, and silent let it remain. The most serious consequence for Descartes was that it broke up the idyllic and meditative repose which had been his, and which was necessary for his work. He loved study, and for the sake of study he needed repose. His moments of rapture were those in which new ideas dawned on him. He could be roused to passion and enthusiasm only as he attained to clear and distinct ideas, his emotions attended the working of his intelligence, and his highest delights were in the triumphs of his thought. He was not a courageous man, nor was he willing to recognise the merits of others. He was original, but not so original as he thought. He gave expression to ideas which were in the atmosphere of his time, but he still carried with him traces and marks of the scholasticism with which he thought he had utterly broken. Descartes had been led into correspondence with Queen Christina of Sweden, the daughter of Gustavus Adolphus. The topics are varied and interesting, and the questions of the queen and the answers of the philosopher form profitable reading. But the queen thought that the questions she wished answered and the answers themselves could be better understood by her if she could

hear them from Descartes himself. She urged him to come to Stockholm. After some hesitation he finally consented to visit the queen. He was royally received, scarcely a philosopher in the world's history had such a welcome and such honour as Descartes received from Queen Christina.

He went, as he said, "to a land of bears, in the midst of rocks and ice." The climate was uncongenial, and that winter seemed to have been unusually severe. Then the queen insisted that the best time for study was in the early morning, so Descartes had to go to the palace every morning at five o'clock. One may imagine what the atmosphere of Stockholm was like at five o'clock of a November morning. To make matters worse, the friend with whom he lived was taken ill, and Descartes often sat up with him during his illness, and after nights of wakefulness went through the cold morning air to the palace. Soon he fell ill, and after a short period he died on February 11, 1650, in the fifty-fourth year of his age.

CHAPTER II

Discontent of Descartes with the Knowledge of his Time—His Account of that Knowledge—His Four Rules for Guidance—The Method of Mathematics—Analysis and Synthesis—Specimen of Synthesis—Extension of Mathematical Method—The Question of Descartes and the Question of Kant—Nature and Limits of Human Knowledge—The Data of Intelligence—The Two Methods—The Search for Certainty—*Cogito, ergo sum*—Clear and distinct Knowledge—Questions raised by the Cartesian Philosophy, and the Answers to them.

THE reason of the discontent of Descartes with the knowledge of his time was that he was persuaded that it was not grounded in principles, was not proven by a right method, that, in short, its foundations were insecure and its conclusions unwarranted. Only in the field of mathematics could he find reasoned truth, grounded on sure principles, and carried to its conclusions by inevitable inference. The knowledge of his time was defective, and carried with it no certainty. It had been gathered from all kinds of sources, huddled together with no method; it was guaranteed only by authority. What we learn by authority is not philosophical, it is only historical knowledge. "From my childhood I gave my mind to the study of letters, since I heard from my teachers that by their help a clear and certain knowledge of all those things useful

for life could be acquired. I burned with an incredible desire to learn. But as soon as I had finished the complete course of study, at the close of which it is the custom to reckon one among the learned, I began to think otherwise. For I found myself involved in so many doubts and errors that all attempts at learning, I judged, profited me nothing save to convince me more and more of my own ignorance. Yet I had studied in one of the most celebrated schools of Europe, in which, if anywhere in the wide world, learned men were to be found. All that others learned there, I also had been taught. Not content with the sciences which we were taught, I read whatever books came into my hands on subjects curious and rare. I knew the estimate others formed of me. I had learned all that they had learned, nor was I inferior to them, though some of them were marked out to fill the places of teachers. And, in fine, this age I judged to be not less flourishing, and as fertile in good minds as any preceding age. All these things gave me the boldness to judge others by myself, and to believe that there was no science in existence of such a kind as I had been given to believe" (*Diss. de Methodo*, p. 3, Elzevir ed.).

He proceeds to review the sciences taught at the school,—the ancient languages, rhetoric, poetry, mathematics, theology, and philosophy. None of these could be strictly called science, except mathematics, though he had found something useful in all of them.

- Mathematics had a solid foundation; the disquisitions of the moralists were towering and magnificent palaces built on foundations of sand and mud. Philosophy had so many conflicting opinions, every

one of which had its learned advocates, but Descartes thought only one of them could be true, and it was likely they were all false. He resolved to abandon the study of letters and to travel. By travel and observation, by observing that views which seemed extravagant and ridiculous to him were accepted and approved by great nations, he was able, he says, to "free himself from many errors powerful enough to darken our natural intelligence." He resolved to make himself a subject of study, in order to find the method and the goal of knowledge.

The knowledge contained in books, composed as they were of many opinions of many different individuals massed together anyhow, did not seem to him to be so near the truth as were the inferences which a man of good sense would draw regarding the matters of his own experience. Further, the conclusions which men reach, passing as they do from infancy to manhood, and governed by desires and by teachers who often did not agree with each other, appeared to him less secure than they might have been, had reason been mature from the moment of birth. Have we, then, each for himself to build the house of knowledge from the foundation? Here he brings in the well-known illustration of the rebuilding of a city. It is not customary to pull down all the houses of a town with the single design of rebuilding them differently, and to render the streets more handsome. But still, he thought that for himself he could not do better than resolve to sweep the opinions he had embraced up to that time out of the way completely, that he might find others more correct, or hold the old opinions after they had undergone the scrutiny of reason. He would

thus be more successful in the conduct of life, than if he were to build on the old foundations and lean on principles which he had taken on trust. Like one walking in the dark and alone, he meant to proceed slowly and watchfully, so that, if he did not make much progress, he might secure himself from falling. He studied carefully the nature of the task he had undertaken, and sought to find the true method by which to arrive at the knowledge of whatever lay within the compass of his powers. He laid down four simple rules for his guidance. First, not to accept anything as true which he did not clearly know to be such; second, difficulties under examination to be broken up into as many parts as possible, so as to provide for an adequate solution; third, to proceed from the simple to the complex, and to go by little and little, and step by step, and to assign a certain order to those objects which in their own nature do not stand in a relation of ground and consequence; and, fourth, to omit nothing, but to make as complete an enumeration and as wide a review as possible.

The mathematical method was in his mind, and the long chains of simple and easy reasonings by which mathematics reached its most difficult conclusions led him to believe that all things were connected in the same way, and that there was nothing so remote or so hidden that it might not be reached, if men were not to accept the false for the true, and if they kept in their thoughts the order necessary for the deduction of one truth from another. So he set himself to a fresh study of mathematics and its method, for the purpose of considering them in the most general form possible, in order to apply them to every class of objects to which

they might be legitimately applicable. He tells us how he was led to apply algebra to geometry, and the mastery which this gave him over both.

To find a method which will advance from problem to problem, from solution to solution, from discovery to discovery, with a conviction of certainty in every stage of the process, was the object of his quest. He seemed to find such a method in the method of mathematics. Mathematics did solve problems, it made discoveries, and it had been progressive. It proceeded from the known to the unknown. Could this method be universal? He set himself to make this method valid for the whole doctrine of quantities, and by his discovery of Analytical Geometry took a long step towards the conquest of the world of quantity. But a still greater step was needed in order to make the method applicable to all knowledge. It may be well, however, to have a clear conception of what he understood by mathematical method. Happily, we have a statement from himself on this matter. It is to be found in the second set of objections to the *Meditations*; the objector urged Descartes to treat the subject *more geometrico*, in order more effectively to convince his readers. The reply is instructive, as it discloses to us Descartes' conception of his own method. "Two things I distinguish," he says, "in the mode of geometrical writing, to wit, the order and the method (*rationem*) of demonstration. The order consists in this, that the things which are first propounded ought to be intelligible without any help from that which follows, and all that follows should be seen to rest on what had preceded. I have endeavoured to follow this order most accurately in my *Meditations*;

the observance of this was the reason why I did not treat the subject of the distinction of Soul and Body in my second book, but in the sixth book, and why I consciously and intentionally omitted many things, because they required an explanation of more things than I could overtake. But the mode of demonstration is twofold, to wit, one is by analysis and one by synthesis. Analysis points out the true way by which a matter is discovered methodically, and as it were *à priori*, so that the reader, if he is willing to follow and sufficiently attend to it, may understand it and make it his own, as if he had discovered it for himself." This, however, makes a greater demand on the reader than he is disposed to yield to. Descartes goes on to describe the synthetic method. "Synthesis, on the contrary, proceeds in the opposite way, and as it were *à posteriori* (though the proof itself is often more *à priori* in this than in that), and clearly demonstrates the conclusion. It uses a long series of definitions, postulates, axioms, theorems, and problems, so that if any of its consequences be denied it points out that it was contained in the antecedents, and thus compel assent from the reader, however unwilling and pertinacious he may be." Ancient geometers knew both methods, though they used only the synthetic method. In the *Meditations* Descartes says he had used the analytic method; he started from the point of view of the ordinary mind, and went on step by step to the end. He states that this is the best way of teaching. The synthetic method is powerful, because the reader usually willingly assents to the definitions, axioms, and postulates, but the difficulty in metaphysics is how to obtain the first notions.

“In rebus metaphysicis de nulla re magis laboratur quam de primis notionibus clare et distincte percipiendis” (*Res. ad sec. Objectiones*, pp. 82, 83).

He does give a specimen of the synthetic method, with all the machinery of axiom, etc., which we shall find to be useful in the sequel. But the main reason why this passage has been quoted is to show that when Descartes uses the mathematical method he mainly — uses it in its analytical form. He uses it as an instrument in the search for, and the discovery of, first principles. As he had applied analysis to mathematics —and by the use of it had discovered the universal mathematical method—he seeks now to make an analysis of all knowledge, that he may discover the conditions of truth and of error. He determines to analyse all opinions into their elements. The opinions he has to analyse are there in his own mind. He knew what were the opinions of men, for he had observed them and had shared them. He felt that analysis must not stop with the breaking up of opinion into their elements; he must go on to analyse the mind itself. So, for the first time in philosophy, a man has arisen who seeks to make consciousness itself the object of consciousness. It was like trying to make the eye see itself. For the first time the Ego stood out as the object of analysis and research. It was difficult to see the problem, more difficult to state it, and most difficult to approach towards its solution.

His aim is to discover in every subject the truths which are concealed in it, to bring into clear consciousness the various elements which have guided our thinking and, perhaps, our action. He had universalised mathematics by claiming for them the right to

deal with all matters which involved order and quantity, whether quantity was found in figures, stars, sounds, or in objects very different from these. The problem for him was the problem of knowledge. To this problem Descartes applies his analytic method. He therefore seeks to know all the presuppositions, and all the points involved in the fact of knowledge. He did not ask Kant's question, How is knowledge possible? for the time of asking that had not yet come. Descartes had to ask his own question first, for, if he had not asked it, Kant could not have conceived his own problem, or its solution. But Descartes could ask what were the conditions necessary for the solution of a problem, and could insist on the necessity of a complete survey of all the points connected with any problem. This he called enumeration or induction. He illustrates induction copiously from mathematics. At present, however, we look at the application of his method of analysis to opinion and to the mind itself. After the manner of mathematics, he is looking for a principle or principles as evident, as sure, as clear, and as distinct as are the first principles of mathematics. He means to find these by analysis, and when he has found them he hopes to use them as easily as the geometer uses synthetically his definitions and axioms. The basis of knowledge is found when, by analysis, we reach those principles of immediate certainty, those intuitions which cannot be doubted, and which are, when understood, perfectly clear in the light of reason. By analysis to reach these intuitions, and then to build on them synthetically until the synthetic propositions shall cover the whole of human knowledge, and explain

the world and man,—this is a brief description of Descartes' hope, and so far of his method.

To reach the intuition, and to bring it into clear and distinct consciousness, and then to build on it in systematic fashion is the Cartesian method. To find that intuition which is ultimate, to see it in its clearness and certainty, and then to build on it step by step—this is the aim he has in view. Ultimately the method of Descartes is really an inquiry into the nature and limits of human knowledge. In fact, he explicitly states this in the *regulæ*. "The most important of all the problems to be solved is the determination of the nature and limits of human knowledge,—two points which we embrace in one question, which must first of all be methodically investigated. Every one who has the least love for truth must have examined this question; since the investigation comprehends the whole of method and, as it were, the whole organon of knowledge. Nothing seems to me more absurd than to contend, at random, about the mysteries of nature, the influences of the stars, the unknown events of the future, without having once inquired whether the human mind is competent to such inquiries" (quoted in Kuno Fischer's *Descartes*, Eng. trans. p. 326).

Thus the problem is for Descartes the problem of human knowledge. Method is not merely an instrument for the construction of knowledge, it is an exposition of the real nature of mind; and a complete analysis of the method will at the same time be a complete exposition of the nature and processes of human knowledge. Further, as knowledge depends on intelligence, we cannot have true knowledge until we know intelligence. If, therefore, we really have

true knowledge of intelligence, and if the data of intelligence are known clearly and distinctly, Descartes holds that by deduction from these first principles we may arrive at all truth. The difficulty is to arrive at the data ; if the data are there, then all men may easily draw the inevitable inferences.

Thus the vital question for him became this—How am I to reach the data of intelligence? How may I arrive at these intuitions which are first and ultimate, which, being given and clearly and distinctly known, form the basis and ground of all certain knowledge. One way, we saw, had been already indicated by him. It was to start from common experience and by analysis to bring into clearness the principles which are involved in common knowledge. It is a legitimate method, and one which Descartes saw to be true and fit, but which he did not consistently use. He suddenly stops short in his method of analysis, and substitutes for a process of analysis a process of abstraction. In fact, he really did not seriously attempt the working out of his process of analysis at all. It is not an analysis of the nature and limits of the human understanding that we find in his method, though that was formally stated to be the intention of it; it is something else that is there. His method is a method of doubt.

These, however, are two methods, not one. It is one thing to analyse the conditions of knowledge with a view to the discovery of the principles involved in every process of knowledge, and to bring into clear consciousness what men had assumed in all knowledge and action, and thus to state clearly the nature and principle of intelligence; it is another thing to apply

the solvent of doubt to all our conceptions and to sweep away every conception which may be questioned and doubted. The first method set forth by Descartes himself was one likely enough to lead him to the discovery of such principles as he might place alongside of the axioms of mathematics, and which he might use generally as mathematicians used their axioms. But this method he really did not use. What he did was to doubt all that might be doubted. The goal of the one method was the discovery of necessary and universal truth; the goal of the other was merely certainty.

Now, Descartes frequently interchanged these two methods, and did not consistently carry either of them to their proper issue. In his description of the mathematical method, and specially in the analytic form of it, he had something clear and definite in hand; but then, he never applied it in the search after first principles. What he really did was to proceed on the quest after certainty, and to apply to all experience the solvent of doubt. By this he did accomplish something, but not what he had in view. Reality to the ancients was given in sense-consciousness; to the Middle Ages it was given in revelation and guaranteed by authority; but to Descartes these two ways had become doubtful. It is not necessary to travel over the road by which Descartes reached the maxim *Cogito, ergo sum*. It has been so frequently described that it has become commonplace. I may doubt everything, and every form of experience; experience itself may be only another form of dreaming: but, says Descartes, I cannot doubt that I doubt. In order to doubt, I must be, and must exist as a thinking being. It is possible

that there is no object outside of me, that the whole sensible world has no reality beyond my thought; but it is incontestable, at least the thought is, that I exercise the function of thinking. It is possible that an almighty betrayer might play upon me so that I might take mere appearance for reality; but he could not deceive me if I did not exist, and he could not work on me if I were not. "I think, therefore I am"; such, with various illustrations and amplifications, is the argument of Descartes. By the application of the method of doubt he has reached one certainty, and he has a clear and distinct conception of this one certainty. It is an axiom, a self-evident truth, like the axioms of mathematics; I cannot state it without affirming it.

This, then, was certain; for if I thought that all was false it was absolutely necessary that I, who thus thought, should be somewhat. As this could not be shaken, Descartes accepted it as the first principle of the philosophy of which he was in search. Having obtained his first principle, he proceeded to apply it. The procedure was somewhat curious, and it remains a curiosity to this day. Instead of inquiring into the nature and mode of working of the thinking being, or of asking what were the conditions of thought, he proceeded in a very different manner. He asked, What is involved in thinking? He answered by making an abstraction. He could suppose that he had no body, that there was no world nor any place in which he might be; but, while he continued to think, he could not think himself away. So he came to the conclusion that the mind was wholly distinct from the body, and though the body was not, the mind would still con-

tinue to be what it was. How could he be sure that the mind was? and how obtain the certainty that his first principle was universal and necessary? The answer to this question led him to ask what was essential to the truth and certainty of a proposition. "All the things which we clearly and distinctly conceive are true." He adds that there is some difficulty in rightly determining what we distinctly conceive.

Underlying his procedure is the assumption that whatever I can think away does not essentially belong to me. In the *Cogito, ergo sum* it is necessary, according to Descartes, to leave behind everything that may have a foreign source. So he abstracts from the body and abstracts from the object of thought and reduces the *Cogito* to the bare potentiality of thinking, to the blank form of thought. The external object becomes bare extension, and the subject abstract self-consciousness; and this is his first principle. There is no analysis of the self or of self-consciousness, no inquiry into the relations of self and not-self, or of subject and object; and his first principle, reduced to impotence in the moment of its birth, remains a principle with no possibility of movement in it. If he had applied the method he describes as the method of mathematics, he might have arrived at rational first principles implied in all experience. As he proceeded by mere abstraction, he had to approach real experience only by arbitrary ways, and he left himself little possibility of reaching a true interpretation of experience. It is true, no doubt, that he, the thinking substance, asserts its existence in the very act by which it denies everything else. But the thinking subject, abstracted by Descartes from all else, and left out of

relation to all else, must remain shut up in isolated particularism, and can never find a way of getting into relations. Descartes did obtain his first principle, but it was utterly barren. How are we to pass from the thinking substance, which is occupied with itself and is moved only by itself, to an extended substance which has no quality save extension? There is really no way of transition from the one to the other. We shall see how Descartes strove to overcome the difficulty. Meanwhile, let us observe how he managed to reduce the self to the mere potentiality of thinking. "By the term *Cogitatio* I comprehend all that is in the mind, so that we are immediately conscious of it. Thus all the operations of the will, intellect, imagination, and senses are thoughts." He lays stress on the word Immediately, and thus endeavours to ward off the objections made to the *Cogito, ergo sum*, to the effect that we may as well say I walk, therefore I am. Descartes replies that not walking, but the consciousness of walking, is the criterion. Thus willing, imagination, etc., are not thought, but the consciousness of them is thought. These are only occasions of thought, and they are not thought until they are referred to consciousness. I am always conscious, and consciousness is *Cogitatio*.

But what of all the experiences of the self—the impressions, feelings, desires, volitions which make up so much of our mental life? From this point of view these are ignored or neglected by Descartes. They are merely particulars, and the stress is laid on thinking in general. Thus, in addition to abstracting the self from the world, it is abstracted also from the concrete elements of its own experience. Thus the Cartesian

philosophy gave rise to a number of speculations regarding the self, the world, and God, which have taken various forms in the evolution of Modern Philosophy. While it contained the germ of the most fruitful developments of the modern spirit, yet the modern spirit had to wander in many waste places ere it escaped from the snares set to it by the master. Abstracted from the contents of concrete experience, and reduced to the mere potentiality of thinking in general, self-consciousness and self-existence became an unverifiable hypothesis, and the very first principle of Descartes became an unverifiable assumption. Thus with regard to the external world, and the reality of the extended, the hypothesis of Descartes prepared the way for Berkeley. Still more relevant is the doubt cast on the reality of self-consciousness by Hume. What is the real content of this consciousness which is the basal certainty of Descartes? Descartes laid stress on the fact of thinking in general. Yes; but what is thinking in general apart from the concrete contents of thought? Hume put this question, and Descartes from his point of view could have found no relevant answer. The *Cogitatio*, which was to Descartes the basis of certainty, became for Hume "nothing but a bundle of different perceptions, which succeed each other with an inconceivable rapidity, and are in a perpetual flux and movement."

It may be well to quote this classic passage. "For my part, when I enter most intimately into what I call *myself*, I always stumble on some particular perception or other, of heat or cold, light or shade, love or hatred, pain or pleasure. I never can catch *myself* at any time without a perception, and never can observe anything

but the perception. When my perceptions are removed for any time, as by sound sleep; so long am I insensible of myself, and may truly be said not to exist. . . . Our eyes cannot turn in their sockets without varying our perceptions. Our thought is still more variable than our sight, and all our other senses and faculties contribute to this change; nor is there any single power of the soul which remains unalterably the same perhaps for one moment. The mind is a kind of theatre, where several perceptions successively make their appearance; pass, re-pass, glide away, and mingle in an infinite variety of postures and situations" (Hume's Works, Green's ed., vol. i. p. 534).

On the one hand, Descartes had separated thinking from the contents of thought, and had left nothing save the abstract potentiality of thinking; and Hume, on the other hand, could find nothing but the stream of particular perceptions, a whirl of gliding internal movements, somehow bound together into a fictitious unity, which had gathered to itself the semblance of a continuous self. It may be observed that Descartes had separated thinking from the objects of thought only in an abstract manner, and that he brought back the objects one by one as he needed them. But that fact does not do away with the mischief wrought by the formal abstracting process. For one thing, he is never clear about the objective reference of thought, nor does he precisely say whether the object of thought is a mental state or an idea, or whether it has an objective reference. While he speaks metaphysically, the object of thought seems to be an idea; when he speaks scientifically, the object seems to be objective, something almost independent of the idiosyncrasy of

the observer. In truth, Descartes may be said to be the father of modern science in a more real sense than he can be said to be the father of modern philosophy. At all events, he left the doctrine of the Self in a most inchoate state.

While Descartes abstracted the thinking process from the contents of thought, Hume, on the other hand, abstracted the contents of thought from the process of thought. In both cases the absent factor was present, though ignored by them. Hume always found himself occupied with some particular impression, but he also found himself in every impression. That is to say, that the conscious self was there in every state. There was the ultimate mystery of states of consciousness, and a consciousness of the states. The impressions were there, and along with them there was the awareness of their presence. These two, thought and the objects of thought, are the inseparable elements of the activity of the conscious self, and they must be taken together. By separating thought from its object, and by separating the mind from the world, Descartes introduced that dualism which spoilt the fruitfulness of his philosophy, and gave rise to that abstract rationalism which divorced philosophy from experience, and gave rise also to that empiricism which divorced experience from thought.

Limiting our view for the moment to the abstract idea of the self, which he set forth, and deferring the account of the attempts to restore the ruptured unity of thought and its content, we may say that his example and his influence have ruled the problems of philosophy to this hour. The problem of the self is the hardest in philosophy, and it becomes all the

harder when we have to think of many selves in interrelation with each other in the unity of one world. How far it is from a solution may be seen from a glance at the current text-books in psychology, and from the discussions about the many selves which the ingenuity of psychologists discover within the consciousness of the one apparent self. Or if a man wants to discover the intricacies of the problem, and to be aware of the many elements in the problem, he may read the discussion in Mr. Bradley's *Appearance and Reality*.

We do not enter into that discussion nor trace the modifications of the doctrine of the self in the schools of modern philosophy, whether Hegelian or other. We only remark that the problem has been set for all of these schools by Descartes. There are many forms of the problem and of its solutions. We have the form of the problem set forth by Descartes himself, in which the Ego is taken to be the form of consciousness, and directly affiliated to this is the phænomenalistic spiritualism of Berkeley, the monadological spiritualism of Leibniz, and the transcendental idealism of Kant. The idea as the content of consciousness has given rise to the Ego as absolute substance of Spinoza, the Ego as absolute activity by Fichte, and the Ego as absolute reason by Schelling and Hegel, and the Ego as absolute will by Schopenhauer, and as individual will by Wundt. Taking the Ego as empirical principle, and subordinating it to its objects, we have the empirical philosophies from Locke to Herbert Spencer. Whether the outcome be idealism or empiricism, they are alike dealing with the problem of the self; and even the idealism of the present day in its highest form turns

out on inspection to be a construction of the ultimate reality in terms dictated by the type of the one self. We pass on to a consideration of the way in which Descartes endeavoured to heal the breach he caused in knowledge by his too abstract treatment of mind and matter.

CHAPTER III

The *Cogito, ergo sum*—Its Meaning for Descartes—What is Thought?—Certainty of Intuitive Truth—Appeal to the Veracity of God—Need of such Appeal, in regard to Intuitive Truth and to the Perception of External Things—Space and Matter—Mind and Matter—Argument for the Existence of God—Dualism—Reality and Perfection—Objective Reality—The Lumen Naturale—Causality—The Place of the Conception of God in the Cartesian System.

THE *Discourse on Method* was really a search for the elementary truths of Consciousness. The *Cogito, ergo sum* was not regarded as an argument, it was the first fundamental rational truth. Its evidence was immediate intuitive certainty. It was clear and distinct. By clearness is meant what is (intuitively present and manifest to the mind,) and distinctness that which is (entirely clear in itself and precisely determined). All these presentations or ideas which are in this sense clear and distinct, whose evidence is not to be deduced from any others but is grounded in themselves, he calls Innate Ideas. The truth of them is self-evident; they are believed as soon as they are understood.

The *Cogito, ergo sum* is thus a necessary truth of reason, and means that wherever there is consciousness there is existence. What, then, is the bearing of this universal and necessary proposition on the fact of my

particular consciousness as something existing here and now? A universal truth is always apprehended in and through the particular; and, in accordance with this, the universal truth that wherever there is consciousness there is existence, carries with it the particular fact that, so far as I am conscious, I exist. But the universal truth does not carry with it the inference that I have existed in the past or will exist in the future. But what Descartes needs is just a proof that the self exists permanently as a simple indivisible substance, that its existence now guarantees its permanent existence. He assumes without proof that thought is a quality, and being a quality it implies a permanent substance.

The main use which he makes of the *Cogito* is that he regards it as a universal truth, and a universal criterion of truth. [The idea of consciousness is inseparable from the idea of existence.] Not to dwell on the difficulty of proving the existence of the self as a spiritual substance, and not to insist on the fact that existence can never be proved, it can only be defined, we may ask (how the *Cogito* should be a criterion of truth.) Why should it be universally true, and be a criterion of all truth? Supposing it true in itself and for us, why should it be true universally? For the sake of clearness let us look again at his definition of the *Cogito*, and take it now from the *Principles of Philosophy*. We use the translation of Professor Veitch. "What thought is.—By the word thought I understand all that which so takes place in us that we of ourselves are immediately conscious of it; and accordingly, not only to understand, to will, to imagine, but even to perceive, are here the same as to think. For if I say, I see, or, I walk, therefore I am; and if I

understand by vision or walking the act of my eyes or of my limbs, which is the work of the body, the conclusion is not absolutely certain, because, as is often the case in dreams, I may think that I see or walk, although I do not open my eyes or move from my place, and even, perhaps, although I have no body; but if I mean the sensation itself, or consciousness of seeing or walking, the knowledge is manifestly certain, because it is then referred to the mind, which alone perceives or is conscious that it sees or walks" (p. 196).

The testimony of consciousness cannot be questioned without self-contradiction. He further illustrates it thus: "If I judge that there is an earth because I touch or see it, on the same ground, and with still greater reason, I must be persuaded that my mind exists; for it may be that I think I touch the earth while there is none in existence; but it is not possible that I should so judge, and my mind that thus judges not exist; and the same holds good whatever object is presented to our mind" (p. 197).

There is still another possibility. Grant the certainty in possession of the mind when it is face to face with intuitive truth, is this certainty to be trusted? There are certain common notions out of which the mind frames various demonstrations that carry conviction to such a degree as to render doubt impossible. As long as we attend to the premises from which necessary conclusions are drawn we feel assured of their truth; "but, as the mind cannot always think of these with attention, when it has the remembrance of a conclusion without recollecting the order of the deduction, and is uncertain whether the author of its being has created it of a nature that is liable to be deceived, even in

what appears most evident, it perceives that there is just ground to distrust the truth of such conclusions, and that it cannot possess any certain knowledge until it has discovered its author" (pp. 198, 199). Descartes is often untrue to his own method, and trusts it only with a hesitating faith. It was open to him to take his stand on the trustworthiness of the faculty of knowledge, and to say that mind is to be trusted when it makes affirmations about truth which it sees to be true as soon as it understands it. To deny that two and two make four is possible only on the assumption that the faculty of knowledge is essentially untrustworthy. If the mind cannot trust itself in the knowledge of its necessary affirmations, how can it trust itself in the search after the knowledge of the author of its being?

This is one of the instances in which the father of rationalism manifests his distrust of reason. Reason is to be trusted only till it establishes the existence of God, and then it assumes an attitude of blind trust, and leaves the responsibility with the author of it. If he were true to his own principles he would boldly have claimed for reason the right to accept as true all that reason demanded as necessary for the validity of its operations. What is the good of establishing a universal criterion of truth if one admits the possibility of a breakdown on the part of the criterion in its most fundamental operation?

It is not, however, the only occasion of the advent of the *Deus ex machina* in the system of Descartes. Dealing with the principles of material things, in the second part of the *Principles of Philosophy*, he makes the same appeal to the veracity of God which he had

made in relation to the self. "Every perception," he says, "comes to us from some object different from our mind; for it is not in our power to cause ourselves to experience one perception rather than another, the perception being entirely dependent on the object which affects our senses" (Veitch's Translation, p. 232). We should be deceived if the idea of this extended matter were presented to us by some object which possessed neither extension, figure, nor motion. Having made this remark at some length, he ends the paragraph by the statement that "this extended substance is what we call body or matter." "Pleasure and pain and other sensations do not arise from the mind and do not belong to it as a thing that thinks, but only in so far as it is united to another thing extended and moveable, which is called the human body." By the senses, then, we are not in touch with reality. Their purpose is teleological, to wit, to tell us what is beneficial or hurtful to the composite whole of mind and body. What, then, is body? "The nature of body consists not in weight, hardness, colour, and the like, but in extension alone. It is simply a substance extended in length, breadth, and depth." The properties of matter have vanished, and there is nothing left for our consideration save the properties of space. In Section 18 we have the curious conclusion that if the matter within a vessel could be entirely removed the space within the vessel would no longer exist, "for two bodies must touch each other when there is nothing between them, and it is manifestly contradictory for two bodies to be apart, in other words, that there should be a distance between them, and this distance yet be nothing; for all distance is a mode of extension, and therefore

cannot exist without an extended substance" (p. 242). The underlying assumption is, that all space must be always full of matter. In fact, this is a necessary result of the identification of the properties of matter with the properties of space. It is surprising that Descartes, having limited the conception of matter to the notion of extension, should yet, in a measure, have anticipated the statement of Newton's first law of motion. "Harum prima est, unamquamque rem, quatenus est simplex et indivisa, manere quantum in se est in eodem semper statu, nec unquam mutari nisi a causis externis" (*Prin.* ii. 37). This is a statement of the fundamental property of matter as it is generally defined by physicists. Every individual thing, so far as in it lies, perseveres in the same state. But this is no property of mere extension, and cannot be deduced from the conception of space. It is true of bodies within space in their interaction with one another, but if space be the only form of substance, and all existing matter but affections of space, there can be no interaction.

Having attenuated the conception of matter until there is nothing left but extension, and having set forth the conception of mind as thinking and nothing more, the problem arose how to get these into relation with one another. It is not enough to plead the mere empirical fact that these are somehow united in the union of soul and body. For mind is unextended, indivisible, and as "nothing besides thinking belongs to the essence of the mind, it follows that nothing else belong to it. But the essence of matter is extendedness, divisibility; and the natures of these substances are to be held not only as diverse, but in

some measure as contraries." How, then, we ask again, are they to be brought into relation to each other. Here is a knot which Descartes cannot untie, and he brings in the Deity to untie a knot which he has himself perversely tied. Man does need God, of that there can be no doubt; but why postulate the action of the Deity merely to restore a harmony only created by the inconsistent thinking of man? The absolute disparity of mind and matter, or, to put it more particularly, of soul and body, formed a crux for the Cartesian school which they were never able to overcome. It is not our purpose to enumerate all the devices employed by them to overcome the difficulty. It is an interesting chapter in the history of speculation, and parallels to it may be found in many quarters. By our undue abstractions we rupture the unity which lies before our eyes, and has only to be rightly seen to be understood; and then we strive all our lives to restore the lost unity, and without success.

Descartes postulated God, first, to vindicate his trust in first principles; and second, to maintain a relationship between mind and matter, which he had made so disparate as to leave no conceivable bond of union between them. Why did he not retrace his steps and revise his definitions? The question is unanswerable. As a matter of fact, he uses principles which he holds to be truths evident by the light of reason to prove the existence of God, and then he seeks to guarantee the validity of reason by the veracity of God. He also places the two elements of human nature so far apart, that any possible union between them can be maintained only by the power of God. Thus there

is necessary a continued creation, or an abiding exercise of divine power, to maintain the commerce of mind and body. It was necessary for Descartes to prove the existence of God, if for no other reason than for this—to make his philosophy a thing which could work.

We do not mean to say that Descartes has contributed nothing worthy to the argument for the being of God. At present we remark only, that it is not a worthy procedure to bring in the notion of the Deity to save a system from bankruptcy. In almost all his works Descartes reiterates his proof for the being of God. It is substantially the same in all of them, though stress is laid now on this and now on that aspect of the argument, as this or that logical need is uppermost. As we have already said, Descartes had failed to do justice to his own principle of the unity of thought and being in self-consciousness. If the consciousness of self is the first certainty, and if we cannot abstract from it, then to seek to go beyond it is futile. But Descartes did not trust his own first principle. We cannot go beyond the consciousness of self, for there is nothing prior to it, and, besides, all objects are in relation to it. There can be nothing which is not in possible relation to the self, and this relationship is the presupposition of thought. It is not possible to take the mind as a thing among other things; a mere *res cogitans* can apprehend nothing but thoughts or ideas. Outside these thoughts and ideas there is another and a contrary series with which thought has nothing to do. Matter thus takes on the attribute of unintelligibility, and notwithstanding the empirical unity of mind and body a chasm exists between them, for thought is not extension, and

matter cannot think. It is a dualism which is fundamental and absolute.

It was necessary for Descartes to find some principle whereby the absolute opposition of mind and matter could be overcome. There must be a way by which the subjective consciousness can hold intercourse with the objective order. He strives to connect the consciousness of self with the consciousness of God. "If we can find God in our minds we have a way by which we can reach the world and bring it within the circle of possible knowledge.

How are we to pass, then, from the simple and sure datum of consciousness to the knowledge of the world? The answer of Descartes is, that wherever we find a conviction as clear, distinct, and indubitable as is contained in the *Cogito, ergo sum* we are warranted in assuming it to be an indication of truth, and an index of real existence. In the Reply to the Second Objections, Descartes gives us a specimen of the geometrical method of procedure in its application to the demonstration of the being of God. He proceeds by definitions, postulates, axioms, and propositions. The relevant matter at present is the axioms, or those ultimate propositions which to Descartes are apprehended with as much clearness and distinctness, and with as stringent a necessity as the *Cogito* is apprehended. These are not deduced from the *Cogito*; they are placed side by side with it as possessing the same note of self-evidence. These axioms, however, enable Descartes to pass from the barrenness of the mere *Cogito* to the wider knowledge which he needs. It is not necessary to quote the ten axioms which he enumerates. The meaning of the first axiom is

that nothing exists of which it cannot be inquired, what is the cause of its existence? of the second, that the conservation of a thing requires as great a cause as the production of it. The third is of more importance,—at least, it plays a greater part in the system of Descartes. “Any thing or any perfection of a thing actually existent cannot have *nothing*, or a thing non-existent, for the cause of its existence.” And the fourth axiom states: “All the reality or perfection which is in a thing is found formally or eminently in its first or total cause” (Veitch, p. 270). The fifth axiom says “that the objective reality of our ideas requires a cause in which this same reality is contained, not simply objectively, but formally or eminently.” Formally or eminently are the notes of real existence, in distinction from merely conceived existence. The other axioms need not be quoted, but these are quoted as they are of significance in connection with the proof of the existence of God. How are we to reach objective reality? or what is meant by the objective reality of an idea? Descartes held that the axiom, that “the objective reality of our idea requires a cause in which this reality is contained” must of necessity be admitted, as upon it alone depends the knowledge of all things, whether sensible or insensible. “From whence,” he asks, “do we know that the sky exists? Is it because we see it? But this vision does not affect the mind unless in so far as it is an idea, and an idea inhering in the mind itself, and not an image depicted on the phantasy; and, by reason of this idea, we cannot judge that the sky exists unless we suppose that every idea must have a cause of its objective reality which is really existent, and

this cause we judge to be the sky itself, and so in other instances" (Veitch, p 270).

X Thus for Descartes, the objective reality of an idea demands that something must exist, apart from the idea, which shall have, in fact, the qualities, characteristics, and features which appear in the idea. Every idea must have a cause of its objective reality which is really existent. It is a large order. In the statement of the axiom it appears as a consequence of axioms four and five, which we have already quoted. Everything and every perfection of a thing must have a cause, and all the reality or perfection of a thing must be in its first cause, and therefore he holds that the contents of an idea must be regarded as an existing thing. X The axiom is of great importance in the procedure of Descartes. On it he relies for any advance he may make from thought to reality. By its supposed cogency he passes from the experience of thinking to the real existence of the thinking being, and the real existence of the cause in which this same reality is contained. X

Thus we have only to determine the contents of our ideas, and to state these contents clearly and distinctly, and we have the means of determining existence. From the necessary connexion between ideas and their causes we have only to know the ideas, and the knowledge of the causes follows of necessity; the perfection of a thing will be found in its first and total cause. Unless we carry with us this axiom, and the stress laid on it by Descartes, we shall not appreciate, at its real value, the statement of the proof for the existence of God. In virtue of this axiom we have only to show that we have an idea in our

minds—a clear, definite, and distinct idea, and the objective reference follows of necessity. All ideas have been sifted by him through the operation of doubt, and only those which have survived the sifting process remain. These survivals of the fittest have the properties of clearness, distinctness, self-evidence, and necessity, which guarantee them as the legitimate fruit of the *lumen naturale*, and we accept them as indubitable. In virtue of the axiom on which we have spoken we pass from these ideas, thus certified, to the real existence of the causes of these ideas. It is a short and easy method, and one which, he thinks, can easily surmount the absolute difference which separates mind from matter. But in truth, when he brings the principle of causality to bear on the question, and when he has put his axioms into harness, the difference between mind and matter, on which such stress was laid in other references, seems to disappear. For ideas are the copy of reality, and if we have the copy we can know or infer the character of the reality. At this point, again, comes in the reference to the veracity of the First Great Cause, for there is a necessity for a guarantee for the correspondence between the copy and the reality. It becomes somewhat monotonous.

Ideas thus possessed are available, in virtue of the axiom, for the determination of existence. But he had seen the need of discrimination among ideas. Not all ideas are available for the determination of existence. Only those ideas which are clear and distinct have the note of certainty. Only those ideas, in other words, which cannot be doubted have a bearing on objective reality. I am certain of my own existence: How is

that certainty to be extended to the world of things and to God? Is there any being without me, the existence of which may be as clear and indubitable as my own existence? This raises the Cartesian question in its most general form. He was aware of the problem; he recurs to it again and again, both in his systematic works and in his *Answers to Objections*. At one time he sets himself to examine the ideas he finds in his mind. He subjects them all to a rigid discrimination. He refers them to their sources. Some he finds to be native to the mind, or innate; some have been voluntarily formed; and a great many have been manifestly received from an external source. First of all, there is the fundamental certainty that I exist. "It is true, perhaps, that those very things which I suppose to be non-existent, because they are unknown to me, are not in truth different from myself whom I know. This is a point I cannot determine, and do not now enter into any dispute regarding it. I can only judge of things that are known to me: I am conscious that I exist, and I who know that I exist inquire into what I am. It is, however, perfectly certain that the knowledge of my existence, thus precisely taken, is not dependent on things, the existence of which is as yet unknown to me; and consequently it is not dependent on any of the things I can feign in imagination" (Veitch, p. 108). He is a thinking being, and true knowledge is possible only to thought. It is through thought alone that our ideas of things can become clear and distinct, and attain to certainty.

I can at least be sure that every conception I have is my conception. And every conception proves that I am, for it is mine. But can I be sure that this body

exists because I touch it. May it not be a mere imagination or a dream? Even if it be an imagination or a dream, I who touch it do exist. After insisting at length on this fact, as he thinks it to be, he goes on to inquire into the character of the objects which are commonly thought to be most distinctly known. For the sake of clearness he takes not bodies in general, but one body, and selects a piece of wax. He traces it through all the changes through which the piece of wax may be supposed to pass. When we examine it we find in it somewhat of the sweetness of the honey it contained, something of the odour of the flowers from which it was gathered; colour, figure, size are there: it is hard, cold,—in short, all the attributes of body are present in the bit of wax. But place it near the fire and it melts. The properties of the wax change as we look. What remains is something extended, ductile, changeable, something which may pass into an endless series of forms. “What, then, is the piece of wax that can only be perceived by the mind? It is certainly the same which I see, touch, imagine; and, in fine, it is the same which, from the beginning, I believed it to be. But (and this is of moment to observe) the perception of it is neither an act of sight, of touch, or of imagination, and never was either of these, though it might formerly seem so, but is simply an intuition (inspection) of the mind, which may be imperfect and confused, as it formerly was, or very clear and distinct, as it is at present, according as the attention is more or less directed to the elements which it contains, and of which it is composed” (Veitch, p. 112).

It appears, then, that the way to a clear and distinct

conception of body is to analyse it into its elements, and to attend to these elements so that we may obtain clear intuitions of them. As for these ideas, the sources of which are without, are not the presentations of the senses effects and copies of things without us? Are not the copies indubitable evidence of the existence of their causes? It is easier to ask this question than to answer it. The presentations of the senses are never false. But I may err in the interpretation of them. I may think of the sun as a round disc that moves of itself, or I may think of it as the centre of the solar system. There is the presentation and there is the interpretation of it; and while the one is not false, the other may be. It is true, indeed, that the common sense of mankind has declared that the presentations of sense are related to external objects. But Descartes affirms that if any of our ideas is to make us certain of the existence of things beyond us, it is not sensation which can assure us of this existence. No doubt our sensations are not subject to our will, and by a natural instinct we refer them to the object outside of us; but these instincts are not infallible, and, though sensations are involuntary, it is possible that they may arise from the conditions of our nature. Even as effects produced on us by external objects, it does not follow that they are copies of their causes, for an effect may be unlike its cause. From the sensational point of view, Descartes concludes that we have no certain knowledge that there is a world outside of us. How, then, do we come to know that there is an external world?

In his answer to this question Descartes falls back on the principle of causality. This is a clear and

distinct conception; and it is certain that from nothing, nothing comes; and that everything is the effect of a producing cause. The cause can never be less than the effect. It may contain more reality than the effect: it can never contain less. The artist is greater than his work, since in him there is something which he has not put into his work. Or, to state the case of equality between effect and cause, there is the form and its impression. The *causa eminens* is illustrated in the former case, the *causa formalis* in the latter. If we have an idea in our minds which contains a reality greater than our nature, then it cannot have come from ourselves: it must have an external source. Have we such ideas?

To answer in detail would take us too long. He examines a number of ideas, and concludes that if there is found in an idea something which is not in its cause it must, of course, derive this from nothing. "I am thus clearly taught by the natural light that ideas exist in me as pictures or images, which may in truth readily fall short of the perfections of the objects from which they are taken, but can never contain anything greater or more perfect" (Veitch, pp. 122, 123). The conclusion is thus stated: "If the objective reality [or perfection] of any one of my ideas be such as clearly to convince me, that the same reality exists in me neither formally nor eminently, and if, as follows from this, I myself cannot be the cause of it, it is a necessary consequence that I am not alone in the world, but that there is besides myself some other being who exists as the cause of that idea: while, on the contrary, if no such idea be found in my mind, I shall have no sufficient ground of assurance of the

existence of any other being besides myself; for, after a most careful search, I have, up to this moment, been unable to discover any other ground" (p. 123). He examines in this light the ideas he finds within himself. To what may be described as the secondary qualities of matter, to ideas connected with them he finds that he does not need to assign any author beside himself. Ideas of matter which are clear and distinct, such as those of substance, duration, number, he might have taken from the idea of himself. As to extension, figure, situation, and motion: "It is true that they are not formally in me, since I am merely a thinking being; but because they are only certain modes of substance, and because I myself am a substance, it seems possible that they may be contained in me eminently" (p. 125).

Thus what we represent to ourselves by way of the senses as qualities of reality is neither clear nor distinct, and contains less reality than is contained in our thinking nature. In truth, what we perceive in them may be contained in our thinking nature, or may be derived from it. So he comes to the conclusion, "that the cause and the origin of my conceptions of finite being need not exist without me. If, in regard to all finite being, I am not clearly convinced that I cannot be myself the source and origin of my own ideas, is there any idea the source and origin of which cannot be in me either formally or eminently?" He has proved to his own satisfaction that modes of substance, being less than substance, may be conceived by the mind from itself. As regards substance of a finite kind, it is not clear that it can contain any perfection greater than the mind, which is itself sub-

stance, and so, from the view of substance and of modes in finite being, there is nothing to compel the mind to conceive of absolute perfection. But I do have an idea of perfection. As this idea must have a cause, what is the cause of it? It has not come from the mind itself, as I am a finite being, subject to error and far from perfect. The principle of causality is clear and distinct, as clear and distinct as the principle of all certainty, because it is impossible for us to think and not to be. But the principle of causality involves the principle that the cause of a conception has more reality than we have in ourselves. The idea of perfection cannot be derived from finite being, neither from the world nor from ourselves; but the idea is there—we are not the cause of it, and it must have a cause. There must therefore be a Being without us who must have all the perfections which we conceive as belonging to Him. Thus we come again to the necessity of the existence of a God. We have seen how imperative is this need on the theory of Descartes. God is needed for many reasons. Let us look now at the way in which Descartes endeavours to justify the need.

CHAPTER IV

The Steps of the Argument for the Existence of God—The Knowledge of Self gives the Knowledge of God—The Notion of the Infinite a Positive Notion—Reality not explicable from the Notion of Contingent and Possible Existence—What the Conception of God is—Truth and Error—Understanding and Will—Final Cause rejected—Relation of God to Mind and to Matter—Cause and Effect—Reason and Consequent.

THE proof of the existence of God is the essential principle of the Cartesian philosophy. On it everything depends. The principles of reality and the veracity of God are for Descartes principles which constitute the foundation of knowledge, and are the main support of the remainder of the system. We have the various elements of the proof set forth in various ways. When he leads us along the path which he took in his search for truth, and proceeds analytically in the exposition of his system, as he has done in the *Discourse on Method* and in his *Meditations*, he states first the certainty of self-consciousness and its implications. Briefly and in outline it is this: we exist and we have the idea of a most perfect Being; and, as we are ourselves imperfect, that idea is not produced by us—it must therefore have a cause. That is one line of exposition pretty frequently expressed in his various works.

When, however, he proceeds synthetically, as in the *Answers to the Second Objections* and in the *Principles*, he begins with the ontological argument and sets forth the idea of God as an axiom, from which all else flows as a consequence. The argument of Descartes is often identified with the ontological argument associated with the name of Anselm, and also with subsequent arguments of the same kind. While there are resemblances there are also differences between the two. At all events, Descartes, who shows his acquaintance with the scholastic argument, was persuaded that the objections to it did not touch his own argument. From the Anselmic argument it would appear that from the mere idea of God His existence followed, just as surely as from the idea of a triangle the properties of a triangle followed. Either He is the most perfect Being or He is nothing at all. But He would not be the most perfect Being if He lacked anything, or if the note of reality did not attach to Him. But the fatal objection was taken, Why should existence as thought be existence in reality. Our idea of God is a conception: are we to hold that a conceived object is necessarily real? Does the conception of God stand on a different footing from all other conceptions? At the best, a conception only implies the possible existence of the conceived object. According to the ontological proof, as stated by Anselm, God alone forms an exception to this rule. This form of the proof failed to show that the idea of God is a necessary one, inseparably bound up with the very nature of man, and imbedded in human nature as such.

Descartes thought that he did ground the idea of God in the very nature of man, and had proved it to be

a necessary conception. Let us trace the steps of his argument. The discipline of doubt had left us with one certainty. If we doubt, we are. This is clear and distinct, and gives us the principle that truth consists in clearness and distinctness of knowledge. Then we have clear and distinct knowledge of the principle of causality. But the principle of causality assures us that the cause must at least be equal to the effect. In fact, the cause of a conception must contain more reality than the effect. Thus we have the idea of God, and the cause of the idea of God is God Himself. We exist and we have the idea of God, how did we obtain that idea? Did we ourselves produce that idea? Descartes is at pains to prove that we cannot be the cause of the idea of perfection which we have. From the nature of causality we must be perfect to produce the idea of perfection. But we are finite: how can we have the conception of the infinite? we are relative: how could we reach the idea of the absolute? we are imperfect, and yet we have the idea of perfection. Even if we have the capacity of becoming perfect, yet what is required is not capacity but actuality. There must be a cause for the idea of God, and we cannot be that cause.

But the principle of causality is a principle of being as well as of thinking. We may ask what is the cause of our being. Can the cause of my existence be a being who is not perfect? Had I made myself I might have given myself all conceivable perfection. But I have not made myself, nor can I conserve myself, for I am not the cause of my own existence. "From the fact alone that I am, and have the idea of a most perfect Being, or God, it follows with complete clearness that

God also exists." We have this idea; we have not received it through the senses, we have received it immediately from God. "It is not even a pure production or fiction of my mind, for it is not in my power to take from or add to it; and consequently, there but remains the alternative that it is innate, in the same way as is the idea of myself. And in truth, it is not to be wondered at that God, at my creation, implanted this idea in me, that it might serve, as it were, for the mark of the workman impressed on his work: and it is not also necessary that the mark should be something different from the work itself; but, considering only that God is my Creator, it is highly probable that He in some way fashioned me after His own image and likeness, and that I perceive this likeness, in which is contained the idea of God, by the same faculty by which I apprehend myself,—in other words, when I make myself the object of reflection, I not only find that I am an imperfect and dependent being, and one who unceasingly aspires after something better and greater than he is; but, at the same time, I am assured likewise that He upon whom I am dependent possesses in Himself all the good after which I aspire, and that not merely indefinitely and potentially, but infinitely and actually, and that He is thus God" (Veitch, pp. 131, 132). Descartes himself expressly says that the force of the proof consists in this, that he himself, with the idea of God in him, could not exist if God in reality were not. That if the God Whom he conceives, the Being who has all the perfections which he does not comprehend, Whom he can only touch afar off with his thoughts, the Being who is removed from all kinds of imperfection, did not exist, then there was really

no certainty, no true knowledge, and no real existence.

Here, then, there is something different from the scholastic argument. Descartes tries to ground his argument in human experience. The idea of God, he contends, is given us in our inner experience, the idea is there in the midst of our world of ideas. The knowledge of self gives the knowledge of God. We cannot get rid of the idea of perfection, and the idea of a perfect Being is the idea of God. "By the name God I understand a substance infinite, independent, all-knowing, all-powerful, and by which I myself, and every other thing that exists, if any such there be, were created. But these properties are so great and excellent that the more attentively I consider them the less I feel persuaded that the idea of them owes its origin to myself alone. And thus it is absolutely necessary to conclude, from all that I have before said, that God exists: for though the idea of substance be in my mind owing to this, that I myself am a substance, I should not, however, have the idea of an infinite substance, seeing I am a finite being, unless it were given me by some substance in reality infinite" (Veitch, pp. 125, 126).

At this point we are reminded of the laboured argumentation of Hamilton, Mansel, and Spencer, and the position they have taken that knowledge of the absolute and the infinite is impossible. These are merely negative notions, they say, and if we try to think them we fall into contradictions. They define the absolute as that which is out of all relation, and the infinite as that which has no limits. This is not the place to argue the question. We mention that

movement of modern thought because we wish to say that the objections based on it had been clearly before the mind of Descartes and had been dealt with by him. He affirms, in virtue of the axiom of causality, that ideas of which we are in possession are available for the determination of existence. He affirms that he has an idea of the absolute and the infinite, and he asks himself what is the difference in content between the idea of the absolute and the relative, between the infinite and the finite. Is the absolute contradictory of the relative? Is the infinite the negative of the finite? He considers the question, and his answer virtually is that we have the idea of finite and relative existence, but in addition we have a positive conception of infinite and absolute existence. Reality to him is not finite and relative: it is infinite, absolute. His argument points to the conclusion, though he does not give it formal expression, that finite and infinite, absolute and relative, involve one another; that we cannot apprehend the relative or the finite without apprehending along with them the absolute and the infinite. It is an important position, and ought to have had a greater influence on subsequent speculation than that which it really had. It may have been that the exposition of it by Descartes was defective, that he made the distinction mainly as a matter of fact, and did not ground it in principle. At all events, the statement is important, and we quote it. "I must not imagine that I do not apprehend the infinite by a true idea, but only by the negation of the finite, in the same way that I comprehend repose and darkness by the negation of motion and light; since, on the contrary, I clearly perceive that there is more reality in the

infinite substance than in the finite, and therefore that in some way I possess the perception (notion) of the infinite before that of the finite, that is, the perception of God before that of myself, for how could I know that I doubt, desire, or that something is wanting to me, and that I am not wholly perfect, if I possessed no idea of a Being more perfect than myself, by comparison of which I knew the deficiencies of my nature?" (Veitch, p. 126).

By this we see that Descartes looked at the infinite as the positive idea, not obtained by negating the finite, but by negating the limitations and imperfections which belong to the very finiteness of the finite. Descartes did not unfold the full meaning of the situation involved in the statement, "I had the perception of God before that of myself." If he had he would have anticipated some of the most characteristic positions of the philosophy of the nineteenth century. The real meaning of his principle is, that the self-consciousness of the finite being is bound up with the consciousness of God, and that the apprehension of the finite and relative involves the apprehension of the absolute and the infinite.

Complete, absolute, and infinite reality cannot be explained from the idea of contingent and of possible existence. Thus the first element in the Cartesian proof of the existence of God is simply this, that the idea of absolute and complete reality cannot be explained by reference to finite and limited ideas. He has demonstrated that he is in possession of the idea of a complete and perfect Being, but is this merely an idea among others in his possession? Am I constrained to regard this idea as a proof of the divine causality, and con-

sequently of the divine existence? As I am certain of myself I ought, if this argument is to be conclusive, to be sure that this idea is not caused by me, but is the effect of God in me. The steps of the argument are, that this idea is necessary, and that it cannot be accounted for by me or anything in me. For an imperfect being cannot produce the conception of a perfect Being. It is not merely that we have the conception of a perfect Being, this was the sole content of the Anselmic proof; it is that we have this conception while we ourselves are imperfect. Thus the proof of the existence rests on self-knowledge. Thus Descartes supplies to the formal ontological argument the starting-point of its significance—that from the very nature of man he is constrained to conceive a perfect Being; and this conception is not the product of man, but the result and effect of the causality of God, and therefore it is a proof of the divine existence.

Our idea of God must therefore be necessary or original, and it must be of divine origin. These are the two conditions of the Cartesian proof. Ultimately it really comes to this: that as the certainty of self is an intuition contained in the fact of self-consciousness, so the certainty of God is given in the consciousness of the idea of God. The successive delineations of the contents of the proof are not so much steps in the argument as the unfolding of the contents of the idea of God, and the discovery of the fact that existence is contained in the conception. Thus self-consciousness and the consciousness of God are aspects of the same intuition; and they belong together.

We are apt to do injustice to the argument of Descartes by certain modes of stating it. It is necessary

to state it consecutively, and to pass from self-certainty to causality, and from causality to the ontological proof of the existence; but these are not to Descartes steps in a consecutive chain of reasoning, they are rather elements in one complex intuition. They are not separable in reality, though they have been stated one after another. Universal doubt had revealed to him his thinking nature and its imperfection. He grasped the one certainty, and out of it flowed the consciousness of his imperfection, and the implied consciousness that there must be perfection somewhere. The idea of the perfect is given in the consciousness of imperfection. In this way he connects the idea of self with the idea of God, and he thinks that the same necessity belongs to both ideas. Connecting this conclusion with the conception of the infinite, which we saw Descartes regards as positive, he argues that the idea of the infinite is primary and original, and the consciousness of imperfection derivative. To be imperfect is one thing, to know that we are imperfect is another thing. If I can make my own imperfection clear to myself, I can do so only in the light of the idea of perfection. To know my defects is a work which implies the work of intelligence. If a man had not the idea of perfection implicitly within his own mind he could never come to the knowledge of his imperfection.

If we had no truth in our possession we should never have entered on that process of self-examination which led through doubt to certainty. Thus from the idea of the perfect has come the idea of the imperfect. The perfect is first, and the consciousness of imperfection is second. True, it seemed otherwise as we proceeded on our way to search for truth, but now,

Descartes concludes, in our certainty of the idea of God all other certainty has its foundation. "It is enough that I rightly understand this, and judge that all which I clearly perceive, and in which I know that there is some perfection, and perhaps also an infinity of properties of which I am ignorant, are formally or eminently in God, in order that the idea I have of him may become the most true, clear, and distinct of all the ideas in my mind" (Veitch, p. 127).

Having concluded that God is, he sets himself to describe what He is. For that is already given in the conception of a perfect Being. He must possess all kinds of perfection. He is absolute truth, veracity, and this ultimate conception guarantees everything. I may trust my presentations, my clear and distinct ideas, and may come to a true knowledge of things. What is clearly and distinctly apprehended is true. Descartes started with that persuasion; now, having proved, as he thinks, the perfection of God, he rests certainty on that foundation. Why do we need this additional guarantee? Descartes desired a guarantee of sufficient breadth and validity to guarantee the whole system of knowledge, and this he found in the idea of God. If we are to obtain knowledge of reality in its wholeness and completeness, then clearness and distinctness of perception needs to be supplemented.

This becomes more clear as we follow Descartes in the treatment of the problem of truth and error. How is error possible? We ought to remark that Descartes deals only with one kind of error—intellectual error. Moral or physical evil is not touched by him. The argument as conducted by him would seem to rule out

the possibility of error. We cannot seek the source of error in God, nor in the nature of our conceptions. As a matter of fact, we are often in error,—how? All error, he says, is self-deception. The possibility of error turns on the distinction between understanding and will. If we were compelled to affirm every true proposition and to deny every false one we should do so, and we could not err. But understanding is passive, and will is active. Error arises from our inclination. It is rather difficult to define understanding and will, as these are used by Descartes. 'He held that every true and distinct perception must of necessity have God for its author, and must be true.' From this point of view truth is eternal, not dependent on the finite will: it flows from the eternal nature of God. If this be so, it follows that error can be explained only by reference to the active power which exists along with understanding. He looks at the understanding as limited, and at will as unlimited. He regarded it as the only faculty, so great that he could not conceive a greater. We are in this position—that the source of error is not in the understanding, because it is dependent on God, and cannot be deceptive. But the will also is dependent on God, for he expressly states that "it is this faculty pre-eminently by reason of which I believe I am created in the image of God." It is through the interaction of the two that error arises. If the will in its action were to limit itself to the sphere of clear and distinct ideas, or if it were constrained to act only in the light of reason, error would not be possible. The will affirms this to be true where it has no evidence of its truth. I make a judgment on insufficient grounds, and I err; I make an

affirmation to others on insufficient grounds, and I deceive them. The mind conforms to truth only when it confines itself to judgments based on clear and distinct knowledge. But the will is free, and makes groundless assertions. The liability to error is grounded also in the limited character of my understanding. If knowledge were perfect we should not err, and if will were altogether rational we should not err; error arises therefore from imperfect knowledge, combined with the action of an arbitrary will.

It is of interest to note, that as formerly Descartes made the essence of mind to consist in thinking, so here in the explanation of the possibility of error he really makes mind to be pure will or self-determination. This has an important bearing on the Cartesian idea of God, or what God is. The will of God is not determined by any end or law. "*Quantum ad arbitrii libertatem, longe alia ejus ratio in deo, quam in nobis; repugnat enim Dei voluntatem non fuisse ab æterno indifferentem ad omnia quæ facta sunt, aut unquam fient, quia nullum bonum, vel verum, nullumve credendum, vel faciendum, vel omittendum fingi potest, cujus idea in intellectu divino prius fuerit, quam ejus voluntas se determinarit ad efficiendum ut id tale esset: Neque hic loquor de prioritate temporis, sed ne quidem prius fuit ordine, vel natura, vel ratione ratiocinata, ut vocant, ita scilicet ut ista boni idea impulerit Deum ad unum potius quam aliud eligendum. Nempe, exempli causa, non ideo voluit mundum creare in tempore, quia vidit melius sic fore, quam si creasset ab æterno: nec voluit tres angulos trianguli æquales esse duobus rectis, quia cognovit aliter fieri non posse, etc. Sed contra, quia*

voluit mundum creare in tempore, ideo sic melius est, quam si creatus fuisset ab æterno: et quia voluit tres angulos trianguli necessario æquales esse duobus rectis, idcirco jam hoc verum est, et fieri aliter non potest, atque ita de reliquis" (*Resp. Sextæ*, 160, 161).

Even the necessary truths that constitute reason he regards as springing from God's determination. It does not spring from the nature of intelligence as such, that there should be eternal truths involved in its very structure. So we may not argue from intelligence to the nature of intelligence as such; for our intelligence is due not to the intelligence of God—it is due to His determination. It was part of his work to show that there were clear and distinct ideas in the human mind; it was open to him to affirm that these belonged to intelligence as such, and were constituent elements of mind whether human or divine. But his doctrine of self-determination as the very essence of mind makes it impossible for us to speak at all of the characteristics of reason as such.

Reason or self-consciousness declares that it is of its very essence that it has in its possession eternal truths which are constitutive of reason as such, and that it may make universal propositions true everywhere and always, and of every grade of being. It turns out, however, that this is a mistake, for truth is something added to reason, and united to it in quite an external manner by the arbitrary will of God. The innate ideas which he showed to us as involved in the very nature of thinking, and which he used to distinguish those ideas derived from the nature of the thinking faculty from those which have another source, turn out to have only a limited universality and necessity.

What Descartes needed was a proof that these truths were such that they were involved in the very nature of a self-conscious being. That ought to have been the conclusion, and, looking at his argument in itself, it is the conclusion. But here we are taught that by sheer determination God declares that necessity should attach to truth. Necessary truth has been determined for us, and there can be no escape from the conclusion that the necessity is purely relative to us, and has no place in the nature of things.

It is difficult to harmonise all that Descartes has written on the relations between understanding and will, whether in God or in us. At one time he speaks as if mind were pure thinking, at another time as if it were pure will and activity. At one time truth seems to spring from divine action, and that God does not *act from reasons*. Again, he speaks as if God may have reasons or actions, but these are inscrutable to man. "I must not be surprised if I am not always capable of comprehending the reasons why God acts as He does." That is one statement; it is another which is in the extract quoted above, to the effect that necessary truths spring from God's determination and do not precede it. In the one case he affirms ignorance of the reasons of the divine action; in the other, he affirms that he knows. Still, the causes of error arise when we treat the obscure and indistinct as if they were clear and distinct, or if we treat the unknown and unknowable as if they were known and knowable. There are innumerable things in the power of God which transcend the grasp of the mind of man, but this affirmation has not kept Descartes from making the statement that in the making and conserving of things God does not *act*

for reasons. Quite in keeping with this inconsistency is the statement regarding final causes, which is thrown in somewhat gratuitously in the fourth Meditation. The teleological explanation of things he thinks to be erroneous. "I am convinced that the whole class of final causes can have no place in the explanation of nature, for it seems to me to be temerity to inquire into the purpose of God." Yet this has not hindered Descartes in other instances from using the clue of final cause in order to reach the meaning of certain mechanisms of nature. He believed in the circulation of the blood, on the same ground as Harvey did—that so provident a cause as nature would not, without a purpose, have set all these valves in one direction. He, like Bacon, declared final causes to be unknowable; Spinoza declared them to be impossible; and the history of modern philosophy declares the fatal consequences of this conclusion.

While Descartes did contribute something of worth to the argument for the being of God, yet when we inquire into what God is, we find that his method and its results have not added anything to the illustration of the character of God. The ethical postulate of His veracity is not regarded so much for any inherent worth it may have, as for the usefulness it has for the working of the system of Descartes. Then the exclusion of final cause from the scheme of things shuts us out from any knowledge of God to be gathered from nature, from history, or from the life of man. In truth, the principle of causality, as conceived by Descartes, made the use of purpose useless and unjustifiable. For, remember that for him mind and matter are absolute opposites. But God is the cause of both.

How? God contains in Himself *eminenter* all that is in mind, but only *formaliter* all that is in matter. God is mind; He is only the creator of matter. In truth, by the very abstractness of the conceptions of mind and body they can never come into relation to one another, yet it is only in relation to one another that they have a meaning. Cause, also, is looked on by Descartes as something working from without, a mere external connection. It took a long period of reflection to arrive at a rational conception of cause, and to see that it is only in relation to change that it has a meaning. But to dwell on that would lead us too far afield.

Apart from these difficulties, Descartes believed that in our consciousness of God he had found a principle on which he could found not only subjective certainty, but also objective fact. If he left unclear the relation of God to finite mind and to the world, he still thought that in regarding God as cause of all things he had found a working principle. The character of God as cause, seeing that God is truth, guaranteed the truth of our valid experiences. The relation of cause and effect was, from one point of view, the relation between God and the world. But this relation inevitably led again to the conception of God as will, and to the conception of Him as pure determination. But the relation of cause and effect is not sufficient for all the purposes of the Cartesian system. For the contents of our ideas must be capable of arrangement in a system, and in a system which can be understood. He had himself endeavoured to begin with the simplest, most clear and distinct, and most comprehensive of all ideas, and from them set forth in systematic fashion the consequences

that followed. But is this link of connection that of cause and effect? Apparently Descartes thought so, or rather, he seems not to have distinguished the relation of cause and effect from that of reason and consequent. Cartesianism did in the long run identify the two, and Descartes went far in the same direction. God as cause might be regarded as pure will, but this is insufficient if the world of experience is to be explained from the principle of ground and consequence. On this last principle it would be necessary to look at God as mainly intelligence, or the principle by which the world is to be intelligently explained as a system. In any case, the difficulty remained for the Cartesian philosophy of passing from the simplicity of the divine nature to the manifoldness of the world. If God is the sum of all perfection, how can we explain the manifoldness and imperfection of the finite? By what process, too, are we to arrive at the imperfection and finiteness of the world? To such questions as these, Cartesianism had no answer.

To explain the world from the principle of reason and consequent we are led to look at God as the ground and reason of all existence, and this is one of the positions of Descartes. To explain the world from the principle of cause and effect leads us to think of God as power, as will, as activity. This also is found in Descartes. He, indeed, passes from one to the other, for he desires to regard the will of God as a rational will. But the exclusion of purpose, and the refusal to seek for the divine meaning of the world, had its influence on the Cartesian system. It may be asked, What was that system? He set it forth in various plans, and from various points of view. He is much

concerned with first principles, and he dwells at great length on First Cause, the ground of all existence. Metaphysics or theology — for either name might adequately describe it — was the subject to which he gave most attention. But he gave attention also to the description of consciousness. Still this description by no means covers the same ground as that marked out as the province of psychology.

CHAPTER V

The two Sides of the Cartesian Philosophy—Mechanism—Animal Automatism—Huxley—Soul and Body—Parallelism or Interaction?—Passion—Freedom—A conscious Automaton—Sensation and Passion—Teleology—Modern Forms of the Cartesian Doctrine—Dr. Ward.

THE method of Descartes has led us to the positions already described. It has brought us face to face with questions and difficulties which he raised and did not solve. He had led us through doubt to the indubitable, and through the certainty of the consciousness of self to the certainty of the consciousness of God, and to the further certainty, through trust in the divine veracity, to the assurance of the truth of our primary experiences. But the question arose, whether we may trust the picture of the universe presented to us by consciousness, and believe it to be a true likeness? We cannot trace here the various problems raised by this ideal postulate, nor inquire into its subsequent history. It leads us to the critical idealism of Kant, and straight to the idealism which holds the field so largely in the philosophical schools of Britain and America.

But there is another side to the Cartesian philosophy—a side which is definitely related to the mechanical theory of the universe, and to the conclusion that all the phenomena of the universe are explicable in terms

of matter and motion. If critical idealism can be traced to Descartes, it is equally certain that modern materialism has its roots in his system. The dualism of the Cartesian system has been the source of a deeper dualism,—to wit, the dualism that subsists between the idealist and the mechanical schools of thought. Mind is substance which has thinking as its sole attribute: matter is substance which has extension and does not think. How are we to establish a relationship between the two? As a matter of fact, the two are in relation or in union with one another in the organism of soul and body. But from the point of view of mind or of matter the union is inexplicable, that is, on the definitions of these as given by Descartes. The difficulty is increased as we follow Descartes along the lines of description of the world of mechanism, in which he endeavours to explain the universe as the outcome of matter and motion working according to law. He was deeply interested in the discoveries of Galileo, as much as he was in the application of mathematics to figure and extension. He inferred from the discoveries of Galileo that the universe was to be explained by the application of law. He assumed that it was intelligible. But the discovery of the circulation of the blood, which so impressed him that he refers to it again and again, led him to conclude that the human body was a mechanism. Thus he concludes that wherever there was extension the principle of mechanical law ruled. It was a great advance on the thought of his time, and gave to science that standing-ground on which it was to build its gigantic superstructure. Whatever may be the ultimate relationship of thought and fact, that is a question which may be neglected

for the time by the worker who is mainly interested in the ongoing of things and in the law and method of their interaction. One may neglect all other questions in order to ascertain whether the law of inverse squares holds of all extended matter. And one may refuse to think of the relation of soul and body or of the seat of the soul, while he is seeking to understand the principles of the circulation of the blood. He may conclude that mechanical laws hold good for mechanisms, and may rejoice in the accurate statement of these laws, without prejudice to the further question of the relations of these laws to purpose and intelligence. Thus one section, influenced by Descartes, followed out the impulse to mechanical investigation given by him, while the difficulties of a mechanical scheme of thought did not occur to them until they sought to make it a principle of exhaustive explanation of all experience. It was then seen that the antitheses of mind and matter, of soul and body, were not exhaustive; that these had to be discarded as ultimate references, and to give place to the more fruitful thought of the relation of subject and object in the unity of one experience.

It is quite true that Descartes did not rightly apprehend the principles of the circulation of the blood. He thought that the motion of the blood was due to the heat which he supposed to be generated in the heart. Though he was mistaken in this, yet he was right in regarding the circulation of the blood to be as mechanical as the working of a clock is. He applied the principle of mechanism as far as it was applicable. What are the extents and limits of mechanical explanation is another question, and whether it is ever ex-

plicable without reference to meaning and purpose is one of the vexed questions of philosophy at present.

It is true, also, that Descartes made mistakes in the kinds of mechanisms and in the character of the mechanical laws by which he endeavoured to explain the movements within the universe, but that does not interfere with the service he did in removing from the ongoing of things in the universe the notion of chance or of arbitrariness and caprice. He brought to the consciousness of the human mind the conviction that properties of things were constant, and that the laws of their interaction were intelligible. Necessity in material things is the condition of their intelligibility, and, rightly considered, necessity as the presupposition of intelligent freedom.

It is interesting to read his endeavours to explain the animal functions as he would have described a piece of mechanism. No doubt the description of the particular forms of machinery may provoke a smile, and the search for a seat of the unextended soul, which has no material quality, in an extended body is somewhat amusing; yet, neglecting all his errors, the procedure is strikingly like the procedure of a modern text-book on physiology. Professor Huxley, in the paper on "Animal Automatism," republished in his *Collected Essays*, describes Descartes as a great physiologist, who had done for the physiology of motion and sensation what Harvey had done for the circulation of the blood. Huxley sets forth a series of propositions which constitute the foundation and essence of modern physiology, and shows that these are fully expressed and illustrated in the writings of Descartes. It is an interesting and instructive paper, illustrative not only

of Descartes but also of Huxley. But for the main proposition that animals are automata, the evidence is far from conclusive either in the hands of Descartes or of Huxley. It is scarcely possible for Huxley to state a scientific proposition wrongly; in fact, he had a most scrupulous scientific conscience: but then, in the interest of the mechanical theory, he was in the habit of going beyond the scientific evidence. It is true that all science is in the way of making its own abstractions, and of neglecting all that does not concern its immediate purpose. That is one of the conditions of its success. But as soon as science makes its abstraction it has ceased to deal with reality as such: it deals only with that aspect of it which it has abstracted. Thus in dealing with the phenomena of life, physiology has abstracted from consciousness, and it deals with its phenomena not as these appear to the subject that lives, but as it appears to the abstract spectator looking on from without. Thus all the theories of sciences are only working hypotheses,—instruments of investigation into the nature and working of that part of reality under consideration. It is illegitimate to make a working hypothesis, abstracted from reality for one particular purpose, the instrument of interpretation for reality as such. The principle of mechanism is good for interpretation where it applies, but nowhere else.

Huxley asks: "How is it possible to imagine that volition, which is a state of consciousness, and as such has not the slightest community of nature with matter in motion, can act upon the moving matter of which the body is composed, as it is assumed to do in voluntary acts? But if, as is here suggested, the voluntary

acts of brutes—or, in other words, the acts which they desire to perform—are as purely mechanical as the rest of their actions, and are simply accompanied by the states of consciousness called volition, the inquiry, so far as they are concerned, becomes superfluous. Their volitions do not enter into the chain of causation of their actions at all” (Huxley’s *Collected Essays*, vol. i. p. 241). Here we have the essence of the Cartesian hypothesis stated with all the lucidity of Professor Huxley, and with all the advantage to it of his superb scientific knowledge. What does it amount to in the case of animals? and in the case of man? Simply to this, that Huxley has utterly neglected to look at the matter from the point of view of the inner nature of the animal, or of man. He is looking at the matter from the outside, from the point of view of the mechanical theory, in which it is fundamental that the series of changes discernible form a closed circuit, and are explicable only in terms of one another. Feelings, desires, all the phenomena of the inner life, do not count, and are nothing to the mechanical view. Leaving the teaching of Descartes on physics for later treatment, let us look for a little at the relations of soul and body as set forth by him. It is difficult to state the precise view which Descartes held as to the nature and source of sensation. For the view is not always expressed in the same way, or in the same terms. There is the mechanism of the nervous system, and there is some way in which that system is in relation with the external world. The nerves are capable of being stimulated, and the stimulation is conveyed through the body and reaches the brain, or one part of the brain in particular. He singles

out the pineal gland as the unitary centre to which all nerve currents tend, and from which they go forth. These currents he calls animal spirits, but their function is as mechanical as the machinery of a watch. They move as they are moved. Every stage of the process belongs not to mind, but to matter. He explains their nature and their function as simply parts of the mechanism of the body. So far there is not, or, there need not be, any consciousness of the process. The whole process belongs to extension, and while he gives the name of sensation to the movements of the nervous organism, it does not appear that, regarded in this aspect, the mind is aware of the movements of the nervous system. Reflex action, in modern phrase, might adequately describe the process. Thus we have a twofold use of the name sensation. One is a state of consciousness, and the other is a process of change in the body.

But how are these related to each other? We can scarcely say. Looking at the frequent descriptions of the mechanism of the body, we find that the separate parts serve different ends. The organs of motion, for instance, are the muscles; the organ of feeling is the heart. But how a movement may cause a feeling is not explained. For Descartes seems to avoid the problem, and in the description of the machinery he loses sight of the end for which the machinery is. He speaks of the heart and brain in their separate action; he seems also to postulate a more subtile kind of machinery to mediate between the two. These seem to be the animal spirits, of which he says: (“What, above all, is here worthy of observation is the generation of the animal spirits, which are like a

very subtle wind, or rather, a very pure and vivid flame, which, continually ascending in great abundance from the heart to the brain, thence penetrates through the nerves into the muscles, and gives motion to all the members; so that to account for other parts of the blood which, as most agitated and penetrating, are the fittest to compose those spirits proceeding towards the brain, it is not necessary to suppose any other cause than simply, that the arteries which carry them thither proceed from the heart in the most direct lines, and that, according to the rules of Mechanics, which are the same with those of Nature, when many objects tend at once to the same point where there is not sufficient room for all (as is the case with the parts of the blood which flow from the left cavity of the heart and tend towards the brain), the weaker and less agitated parts must necessarily be driven aside from that point by the stronger, which alone in this way reach it" (Veitch, pp. 53, 54). All our involuntary movements, and all the activities common to us and to animals, depend only on the arrangements of our organs and on the movements of the animal spirits, and these are produced, precisely as the motions of a watch are produced, by the uncoiling of the main-spring and the correlations of the wheels.

The machine of the body is wonderful, and the description of it is wonderful. It is complicated, it is articulated together: its parts form themselves, place themselves into relation with each other, and they form a unity. The human body is one, and in a certain sense indivisible. The soul must therefore be present to the whole organism, but it may be specially united with one of the organs. The principal

question in relation to the two substances is, how movements are to become sensations and perceptions? It is evident that some point of contact must be found. The function of the animal spirits is to transform movements into sensations and perceptions, and sensations and perceptions into movements. The animal spirits have their source of production in the heart, and their point of action on the organs in the brain, and the soul must have its seat in one or other of these organs. As the animal spirits act from the brain, there must the seat of the soul be sought for.

Not to speak at present of the contradictions inherent in this view, we proceed to follow Descartes as he describes the origin of the passions. The impression made on us becomes perceptions and motives, by the action of the mind on it. A feeling is instinctively aroused by the presentation of the object, and the will acts on the animal spirits, and action suitable to the circumstances ensues without a conscious exercise of volition. He gives examples of how the mind and body act on each other, how impressions of objects unite themselves in the gland which is in the centre of the brain, how the passions are aroused in the soul; and these he regards as illustrations of the way in which the animal spirits carry on their proper business. In successive articles of the treatise *De Passionibus* he gives examples of the movements of the body which accompany passions, and which do not depend on the mind; the main conclusion being that the origin of the passions can be explained in a purely mechanical way. The psychical character of the passions is ignored, and he seeks to explain their origin and nature from the physical side.

What of the conflict within a man between motives impelling him to different lines of action? The conflict is real, but it is not understood. The conflict is not one which has its origin and character within the mental nature of man; it is simply the meeting of movements in opposite directions, which somehow touch the organ of the soul: one comes from the body through the agency of the animal spirits, the other from the soul through the will. "Attamen potest adhuc quidam conflictus concipi, in eo, quod sæpe eadem causa, quæ excitat in anima aliam passionem, excitet etiam quesdam motus in corpore, ad quos anima nihil confert, et quos sistit aut sistere conatur quam primum eos observat. Ut experientia constat, cum id quod excitat metum, efficit quoque ut spiritus ingrediantur musculos qui inserviunt movendis cruribus ad fugiendum: et ut voluntas audaciæ exercendæ, eos sistat" (*De Passionibus*, Art. xlvii.).

There is a real conflict, but what are the powers in conflict? Is it a conflict between the higher and lower nature of the soul, between reason and desire, between the conscience and feeling; is it, in short, a conflict within the soul at all? or is it a result of the opposite qualities of mind and body, between mechanical necessity and the freedom of the will? There can be no doubt as to the answer of Descartes. The conflict is a consequence of the disparity between mind and matter. The mind, the essential quality of which is freedom, must realise that freedom, but it is united to a body which is altogether subject to mechanical law, and what comes from the body must from its very nature be opposed to the mind. The mind must subdue the passions, so Descartes says,

and it is not clear how it is possible on these terms.

It is not necessary to discuss further the treatise on the passions, for in the foregoing section we have found the essential part of Descartes' view. The rest of the treatise may be regarded as illustration of the fundamental thesis. It may be remarked, however, that the possibility of a conflict in man is a testimony to the worth and dignity of man. It is the possession of self-certainty and freedom that makes it possible for man to combat the passions arising from the mechanical movements of the body, or within the body. It needs understanding and will on the one hand, as it needs motion on the other, to produce a struggle. Passions arise in man, who possesses or unites body and mind in himself. For in man alone is there a union of a body with a mind. Animals have not understanding and will. They move as they are moved, for without self-consciousness there is no mind, no thought, no soul. Animals are automata. Here we see the importance of the Cartesian doctrine of the passions. The animals have no passions, for the passions become such only in virtue of the opposition of the mind to the mechanical movements initiated by the animal spirits. But in animals there is no opposition. True, they appear to have sensations and impulses; but sensations and impulses, whether in animal or in man, are regarded by Descartes as mechanical. So animals are automata. They feel, see, and hear, hunger and thirst, but they have no clear and distinct knowledge, and they can therefore have no soul. Descartes is thus driven to the conclusion that sensations and impulses even in

man are purely mechanical, and have nothing in common with psychical activities. Hence the importance which Descartes attaches to the passions. They are the signal witnesses which attest the reality of the union between mind and body. And as such they have their importance.

The difficulty is how to conceive a relationship between mind active in thought and volition, and matter regarded as merely extended and inert. Animals had no activity of thought and volition, and therefore the application of the conception of mechanism was sufficient to account for all the phenomena of animal life. They were automata. But intelligence and volition offered a point of resistance to the reign of mechanism, and mind was a clear and distinct idea, and was real. The inexplicable blending of mind and matter in the organic man left no resource for Descartes but to bring in a new conception of a unity of both, in which consciousness was reduced to a minimum. This reduction to a minimum was necessary, because mechanism could not be dispensed with. It was awkward, certainly, that he had regarded mind as the one primary certainty, and mental activity as assured. But in the confused union of mind and body anything might happen. Still, it was because of the intellectual and voluntary activity of man that he was a conscious automaton, and for the lack of such activity that the animal was a mere automaton. Mind or spirit he had rightly described by means of this intellectual and spontaneous activity. Sensations and other passive states became as inexplicable from the side of mind as they were from the side of matter. The only explanation of them which he

advanced was teleological. Thus he ran against another form of dualism—that between mechanism and teleology, a dualism which he had in another connection repudiated. Final causes or ends had no place in his scheme of thought, but sensations and passive states generally exist solely for the benefit of the composite soul and body, as indications of what might be hurtful or beneficial to the organism. In fact, the original dualism, the absolute disparity between mind and matter, is the fruitful mother of a numerous offspring of contradictions.

Nor is he consistent in the representations which he makes as to the place they have, and the functions they perform. In the first "Meditation" sensations and sense perceptions are psychical facts, and are related to the mind. The last regards them as something which belongs to the composite unity of mind and body. But in the treatise *De Passionibus* the passions alone, as we have seen, are referred to the union of soul and body, while sensation and impulse are referred to body alone. In fact, we might obtain support for contradictory descriptions of the nature of sensations from the writings of Descartes. We might say that sensations are unclear modifications of thought, or we might say that, as presentations of sense, they are not merely psychical, or we might say that they are merely bodily and mechanical, and we could produce evidence for any of these propositions.

Each of these positions has its consequences for the presuppositions of his system. If sensations be purely mechanical, then the meaning and function of perception and feeling are unintelligible, for they can, on these terms, have no reality. If the human body is

a mere machine there is no escape from the conclusion that what is true of animals is true of man: he is also an automaton. Descartes would require to restate his doctrine of the possibility of error, for error has its source and possibility in the activity of man; but if there are no sensations, in the proper sense of the term, there are no presentations of sense, no unclear thoughts, nothing to be misunderstood by the will, and no error is possible. He must affirm the fact of sensations, and at the same time deny them. He can neither affirm nor deny them without the destruction of the most characteristic parts of his new philosophy. If the existence of sensation as a mental fact be denied, then the trustworthiness of consciousness is denied, and all the argumentation which led him through doubt to self-certainty vanishes. It is not necessary to elaborate the matter further, for the truth is that the fact of sensation is utterly inexplicable from the Cartesian standpoint.

It is not possible within our limits to trace the wrestling of the Cartesian philosophy with this difficulty. The union between soul and body was a fact, but an incomprehensible fact. It cannot be explained from the view of matter, nor of mind, but it is, and it can only be produced by divine power. Mind does not move body, nor does body move mind, but movements follow volitions because God brings that to pass. Volitions are not causes; they are only occasions for the forthputting of the divine activity, in virtue of which motion takes place. Thus also are explained the relation of sensations to ideas, the conception of extension, and our knowledge of bodies. This is what is known as Occasionalism, and it is a legitimate

development of Cartesianism. More important and more lasting is the influence of Cartesianism on the relation of mechanism and teleology, on the various attempts to conceive the relation of mind and matter, and on the relation of the physical series of happenings to the psychical series. The path of philosophy is strewn with the wrecks of theories elaborated to account for the relation of the two series. Thus we have the doctrine of conscious automatism, which has been fiercely advocated by Huxley; the double aspect theory, which has its living advocates, and other forms which space forbids to enumerate.

In truth, the controversy is a living one, and is one not likely to be soon closed. On the one hand, we have sometimes the confession that inexplicable enigmas emerge, if we press the mechanical theory to its issues. Then we come face to face with the seven *Welträthsel* of Du Bois-Reymond; and these are not exhaustive. On the other hand, there are the physicists, with their belief in the efficiency of the conception of mechanism, and their disposition to call every view empirical until it appears as a deduction from a wide-reaching mathematical law. Then the fact that the conception of a mechanism has enabled physicists to form a conception of the working of the natural forces, and has given them command over the forces of nature, gives to the conception of mechanism a position almost impregnable. We shall return to this aspect of the case presently.

At the same time, we desire to say that the conception of mechanism is not ultimate nor self-explanatory. It is useful, and valid within certain limits. It is also to be observed that it is by no means

exclusive of teleology. A deeper consideration of the two conceptions leads us to see that teleology without mechanism is powerless; that if it had no means to realise itself, purpose would remain in the clouds. It could have no hope of realisation if it did not lay hold of a system of efficient causes, and if it did not make it a mechanism for the realisation of itself. On the other hand, it may be observed that mechanism without a purpose is also without a meaning. One of the deepest needs of our minds is that of finding the meaning of a mechanism. This is as much a human need as is the necessity for discovering the cause of a thing. In fact, it is the same human need looked at from different ends. The statement may be illustrated from the labours of the biologists, who under the impulse of Darwin are engaged in working out the theory of evolution. It is a pressing need for them to find the purpose, or the utility, and the advantage to the possessor of every modification of the organism. It is interesting and instructive to read the accounts of mimicry, of the causes of the colours of animals and birds, of the advantage in the struggle for existence of adaptive change. It is curious, also, that this labour in teleology is placed on them in the interests of a theory which formally has excluded teleology from having any influence as a real source of efficiency.

Even if we are successful in applying generally the conception of mechanism to an organism, we shall immediately have to modify the conception of mechanism, and adapt it to the new phenomena. For an organism is a peculiar kind of machine. In it there are other phenomena than that of being moved by impulses from without. There is the fact of sensibility,

which has no place in a machine. In organisms we have to deal with and whatever may be our view of strenuous may be our denial of force, the fact remains that living bodies act of their own. Living bodies act. They are able to provide for the energy for the doing of their work power of intussusception. The organism repairs itself, constructs itself. It responds to external impulses for its movement within limits, its own action. In the nature of the organism counts for a general result. If the course of the action that can be predicted, the prediction is the convergence of the inner and the outer. To explain a machine, we take into account the action on which it is constructed and the materials of which it is made. We look not at the machine itself but at the materials of which it is made, for the adjustment of parts, the whole to parts and of parts to whole, the pressure pressed on it from without. But the purpose, the intention, the explanation for in the inner life of the organism.

THE NEW PHILOSOPHY

mile there may be thousands of organisms, the environment may be one, the elements from the environment for the uses of the organisms are as various as are the organisms. The environment selects what it needs. This is true for all organisms. If we are to call the organism a machine we must modify our definition of a machine.

If this is true regarding all life, *à fortiori* it is true regarding rational life. Descartes saw that in conscious life he had something that reacted in a special way against the environment. He emphasized the intellectual and voluntary activity of whose existence he was persuaded. Men are for him essentially active and independent of the environment. In fact, this was the perplexity which troubled him: how could such intellectual and spontaneous activity co-exist with a world the characteristic of which was the absence of spontaneity. The inner states generally, were inexplicable for him from the side of matter or of mind. As we have pointed out, their function was solely teleological: to indicate what was beneficial or hurtful. The argument cannot be carried further; we may refer to the best discussion of the problem.

he believes to be shared by all his fellow-men, nay, though in less developed forms, by every living thing. Experience in every case consists in interaction between individual and environment, an alternation of sensitive impression and motor expression, the one relatively passive, the other relatively active. Absolute activity and absolute passivity are limiting conceptions to which we have no answering experience, the one being commonly attributed to God only, and the other only to primeval matter. Devoid alike of creative activity and of the inert indifference of senseless clay, each man finds himself, and believes all other sentient to be, at once sensitive and reactive, feeling as well as receiving, and prompted by feeling to act. It must surely ever remain futile, nay, even foolish, to attempt to explain either receptivity or activity; for what is there in experience more fundamental? And being thus fundamental, the prime staple of all experience, it is absurd to prove them real, since in the first and foremost sense of reality the real and they are one. What then, I ask again, are we to say of the attempt to disprove their reality?" (*Naturalism and Agnosticism*, vol. ii. pp. 52, 53).

CHAPTER VI

Matter—Matter and Motion—Quantity of Motion—The First and Second Causes—Matter in abstraction from Mind—Matter and Extension—Professor Tait on Newton's Laws of Motion—Criteria of Objective Reality—Development of the Universe according to Natural Law—Mechanical Evolution—Difficulties connected with the System—Fruitfulness of the Main mechanical Conceptions of Descartes.

It is easier to apply the principle of mechanism to material things than to organisms. For material things have no principle of self-action, they move only as they are moved. The postulate of physical science is that it is inert, and that all bodies continue in the state in which they are, unless they are changed by external force. If this be so, it is evident that the principle of mechanical explanation has not the difficulty to meet, nor the resistance to the acceptance of it, which occurs on the supposition that the body can move itself, and can direct its action from within. This is so obvious that it did not escape the attention of Descartes. The necessity of conserving the fundamental principle of the essential disparity of mind and matter led him to various devices to account for the movements of animals on strictly mechanical principles. But on these we do not dwell.

We may, however, dwell on the manner in which he

connects the metaphysical and physical parts of his philosophy. God was related to mind as the principle of knowledge; how are we to conceive of the relation of God to matter? In relation to bodies, God is the principle of motion and of rest. Motion needs, he says, a double cause—one universal and general, which is the general cause of all the motions which are in the world; and a particular cause, from which particular parts of matter may acquire the motion which they had not formerly had. The general cause is God, who created matter, along with motion and rest, at the beginning. The quantity of motion and rest must therefore remain always the same. This follows from the nature and perfection of God. “*Intelligimus etiam perfectionem esse in Deo, non solum quod in se ipso sit immutabilis, sed etiam quod modo quam maxime constanti et immutabili operetur*” (*Principiorum Phil.*, ii. 36). Thus from the immutability of God, as well as from the nature of bodies, Descartes concludes that the quantity of motion in the world is unchangeable.

While God is the general cause of all the motion in the world, yet there are second causes, and these are also interpenetrated so by the unchangeableness of God that they must act regularly, and according to fixed rules. These laws of motion are second causes. Bodies are inert, and they continue in the state in which they are till changed by the application of some outward force. It is to be noticed that Descartes, in the subsequent part of the treatise on the principles of philosophy, deals only with second causes. Having reached the motion of second causes he deals henceforth with them alone. All the changes of motion in the

world, and all the phenomena connected with these changes, are to be explained, not from occult causes, but from the interrelations of bodies of matter. This is the significant character of his physical philosophy. In whatever way he reached this conclusion, whether by reflection on the unchangeableness of God or by reflection on the properties of matter, the significant thing is that he sets himself to explain the changes of the world from mechanical principles alone. He has set the example, which physical philosophers have followed to this hour.

He took matter in abstraction from mind. He assumed that he might know its properties; and these properties he identified with extension, or rather extendedness. It is quite possible to take the properties of matter in abstraction from mind and to make no reference to the innumerable questions which immediately arise in connection with the knowableness of matter. This is what physicists usually do, and in doing so they sometimes sneer at metaphysicians as they pass on. Here is a characteristic passage from a most distinguished physicist, and one of the best teachers ever known by the present writer. Professor Tait, in the opening paragraphs of his treatise on Newton's *Laws of Motion*, thus speaks: "Reason and experience force on all who rightly employ them the objective reality of the Physical Universe. It exists altogether independently of the senses and subjective impressions, by which alone a conception of it can reach our minds. Denial of this statement lands us at once in hopeless inconsistency. It is scientifically certain that the physical universe existed before there were any senses to perceive it, and that during these ages it would have

produced sensuous impressions if organs of sense had existed. Although, therefore, it can only be conceived of as related to the senses, it has an existence altogether independent of the senses. Acceptance of this statement leads to such difficulties only as exercise the ingenuity of Metaphysicians. The more reckless of the class have denied that the physical world is real; the more cautious of them have been striving to determine precisely what its objective reality means. Wishing the latter more success than they seem hitherto to have had, we leave the problem on their hands. The objective realities in the physical world are of two kinds only: Matter and Energy. Our conviction of their objectivity is based on the experimental fact that we cannot alter the quantity of either. In technical language, we therefore speak of two great General Laws—Conservation of Matter and Conservation of Energy.”

We quote this interesting passage not for criticism, but as an example of the attitude of mind of the physical philosopher. There is a certain grandeur in the appeal to Reason and Experience, and a splendid assumption in the reference to “all who rightly think” which are most impressive. The criteria of objective reality seem so simple and so obvious that at the first blush of it the poor metaphysician feels somewhat ashamed. It is scientifically certain that the universe existed before there were any senses to perceive it. Well, in a certain sense this is true, but the truth of it does not settle the matter. It is not quite so easy to settle these questions as Professor Tait seems to think. For even the statement, that the universe existed before there were any senses to perceive it, still leaves the

question of the reference to intelligence untouched. For the universe then existed in relation to intelligence. The second criterion consists in the proposition, that the objective reality depends on our ability to alter or not to alter the quantity of matter or energy. This statement is a relative one. It is quite relevant as a ground for our conviction that the quantity of matter is something which we cannot change, but is that a sufficient ground for the assertion that the quantity of energy or of matter in the universe is constant and unchangeable? The statement as to the conservation of matter and the conservation of energy is absolute, and the proof of it is experimental, limited, that is to say, to the quantity of matter which we can examine, and to the experimental means at our command. Professor Tait would need to undertake another inquiry, in order to justify his procedure in extending the criteria of objectivity from the matter and energy on which he could experiment to the matter and energy contained in the universe. In order to do this he must call in the aid of the despised metaphysician. But the physicist is in the habit of making assumptions which he does not criticise, and to assume as universal what, on his own grounds, he cannot know or prove.

For one thing, the physicist has always dealt with the physical world in abstraction from intelligence. Even if he does refer to intelligence he limits his reference to the suggestion, that it is only by the senses and subjective impressions that a conception of the universe can reach our minds. With a good deal of *naïveté*, and with touching metaphysical simplicity, Professor Tait speaks of a conception reaching us

through the senses and through subjective impressions, never thinking of the work done by the mind ere impressions can reach the standard of conceptions. The naïve realism of the physicist we must, for the most part, leave uncriticised here. He makes the abstraction from intelligence once for all, and proceeds on the assumption that, as far as physics are concerned, his procedure is altogether objective. Let us follow him in his work, always carrying with us the reference to intelligence that is implicit in every assumption that he makes.

The attitude of the physicist is precisely that of Descartes, so far as he deals with the physical world. This is his significance for modern physical thought. Notwithstanding the fact that in almost every section there are constant references to the divine action, yet the operative causes are really the second causes. His procedure is mainly deductive. Yet he occasionally admits the necessity of an appeal to experience, or to what Professor Tait calls experiment. He asserts that the matter of all the bodies in the universe is one and the same, divisible into the same parts, and are divided in many ways, and are moved in diverse ways but always in such a way that the whole quantity of motions in the universe are conserved. "At quam magnæ sint istæ partes materiæ, quam celeriter moveantur, et quales circulos describant, non possumus sola ratione determinare; quia potuerunt ista innumeris modis diversis a Deo temperari, et quemnam præ cæteris elegerit, sola experientia docere debet; jamque idcirco nobis liberum est, quidlibet de illis assumere, modo omnia, quæ ex ipso consequentur, cum experientia consentiant" (*Prin. Phil.*, Pars. iii. sect. 46). Thus Descartes, while assuming that

all matter is primarily one and the same, leaves room for experience to determine what are the actual collocations of matter in the world, and what the character of its movements may be. There are limiting conceptions, on the one hand, that the total quantity of motion is conserved, and, on the other, that the primal matter is one and the same.

More characteristic and more important is the conception which he throws out, that the universe might have developed by natural laws out of a less perfect primitive condition. He throws out the suggestion under reserve. He has the fear of the Church before his eyes, and concedes that the world was created perfect and complete, and he cautiously throws out the suggestion that the world might have developed by the action of natural laws from chaos to order. Having stated what the laws of nature, to which we shall presently return, are, he adds that from these, as causes, all the effects which appear in this world, according to the laws of nature as expounded above, can originate. "*Et non puto alia simpliciora, vel intellectu faciliora, vel etiam probabiliora rerum principia posse excogitari. Etsi enim forte etiam ex Chao per leges Naturæ, idem ille ordo qui jam est in rebus, deduci posset, idque olim susciperim explicandum; quia tamen confusio minus videtur convenire cum summa Dei rerum creatoris perfectionæ, quam proportio vel ordo, et minus distincte etiam a nobis percipi potest; nullaue proportio, nullusve ordo simplicior est, et cognitu facilior, quam ille qui constat omnimoda æqualitate; idcirco hic suppono omnes materiæ particulas, initio fuisse tam in magnitudine, quam in motu inter se æquales, et nullam in universo inæqualitatem relinquo, præter illam quæ est*

in situ Fixatum ; et quæ unicuique cœlum noctu intuenti, tam clare apparet, ut negati plane non possit" (*Prin. Phil.*, Pars. iii. sect. 47).

It is not of much importance to determine what the original state of matter was, for in virtue of the action of natural laws matter must pass through all the states which it is capable of assuming, "Si formas istas ordine consideremus, tandem ad illam quæ est hujus mundi poterimus devenire: adeo ut hic nihil erroris ex falsa suppositione sit timendum." We have here a statement of the principle which lies at the basis of every scheme of evolution of the mechanical sort. From the simple to the complex, from chaos to order, through the operation of fixed laws, is the thought in his mind. Evolution from within through law is surely a great thought, and it describes the aim of science from his time to our own. So far it seems accepted now as the principle which guides the action of scientific workers in all the departments of science. Sometimes the simplicity is overdone, and in many cases a false simplicity is postulated in order to find an apparent progress from the simple to the complex, from the homogeneous to the heterogeneous. We find, for example, such a maxim as this, that "universally the effect is more complex than the cause," a reading of the law of causation which is possible only if we neglect the system of things in the case of cause, and surreptitiously bring it in in connection with the effect. The axiom of causality postulated by Descartes is precisely the opposite of that which we have taken from the writings of Mr. Herbert Spencer. Cause with Descartes has in itself all perfections, and while it is equal to the production of the effect it is not exhausted by the

production of the effect. The method of procedure is deductive from cause to effect. He is aware of the objection that may arise from the consideration of the possible multiplicity of causes, for this effect may have been produced by this or that cause. He is aware, also, of the necessity of experience and experiment, but the experiments are so numerous and so costly that they could be carried out only by the co-operation of many men.

His conception of matter also placed difficulties in his way. The only properties of matter recognised by him are those of extension, divisibility, and mobility; and he burdened himself by attempting to explain the phenomena of nature from these alone. There are properties of matter which cannot be reduced to these three. It is something in his favour that, notwithstanding the fact that he made space to be the fundamental property of matter, he yet did arrive at something like the true conception of inertia, and stated the first law of motion in terms not unlike those which were used by Newton. All changes in the outward world are due to the operation of forces operating on matter from without the particular body to be moved. "Every particular body, so far as in it lies, perseveres in the same state, whether of motion or of rest." "*Prima est, unamquamque rem, quatenus est simplex et indivisa, manere quantum in se est in eodem semper statu, nec unquam mutari nisi a causis externis*" (*Prin. Phil.*, ii. 37). Resistance to change is thus the fundamental property of matter, and all matter has this property. The greater the number of parts there is in a body, the greater is its resistance to change. He calls the quantity of parts the mass, the

amount of motion the velocity, and the product of the mass into the velocity is the measure of force. His second law of nature is, that every moving body moves in a straight line. There is no empty space. And therefore every moving body must come into contact with other bodies. He distinguishes seven cases in which bodies come into collision, and from these he formulates seven rules according to which the changes resulting from collision will take place. It is not necessary to enumerate these, for the main thing is that, according to him, the quantity of motion always remains the same, and therefore the mass and the velocity vary in inverse proportion to one another. Every body which causes another to move must lose as much of its own motion as it communicates to that body.

Into the further details of the mechanical system of Descartes it is not necessary to enter. The identification of matter and space, the supposition of a *plenum* or of a space which is full of matter, necessarily led to the supposition that motion was determined by impact alone. It necessarily led to the supposition, also, that the movements of fluid bodies could not be explained by those laws which sufficed for the explanation of hard and solid bodies. For him space is extension, and extension is the property of an extended thing, and where there is extension there is also matter. There can be no limit to the material world either in the way of a maximum or a minimum. For there is no limit to space as a whole, and there is no limit to the divisibility of matter. Any change within matter is a change of it from place to place; every change, therefore, is due to motion, and takes place according to the laws of motion. These laws are deduced from the conception of the

unchangeableness of God, from the assumption that the sum of motion communicated to the universe at the creation remains unaltered during its conservation. Conservation he regards as continued creation. While the quantity of motion remains constant, the distribution of it may vary in space and time, but no motion is lost and none can begin anew.

From this it is obvious that Descartes found that the principles with which he starts in his philosophy of nature were too few, too simple, and too abstract for the upbuilding of a world. What he does prove, if he proves anything at all, is that the divine power at work in the world is constant, and the quantity of motion as something constant is derived from the supposition that the divine power is constant. On the Cartesian principle, there is nothing to hinder the notion that, at some stage of the world's history, there might be a new forthputting of divine power; and if there were such, the quantity of motion might also be increased. For on the Cartesian hypothesis the divine power is not exhausted by the quantity of motion in the world. Thus the proof of the quantity of motion in the world as constant would lead inevitably to the conception that the making of the world exhausted the power of God, or to the identification of God with the world. Some way must be found to identify the divine action with the actual outcome of it in the world, so that it could not be increased or diminished. Here, however, we are evidently engaged with considerations bearing on metaphysics and theology, and not on physics.

Physically, too, the system of Descartes is threatened with bankruptcy at every turn. He cannot explain the

physical state called rest, he cannot relate it rationally to motion, or motion to it. He needs a miracle at every moment to keep things moving, for it is not the quantity of motion that is constant, it is energy. This was seen by Leibniz; and his doctrine, which is also that of Newton, has found its highest expression in the law of the Conservation of Energy. This is now the accepted conclusion of physics and chemistry, and forms a criterion of the validity of every physical conclusion. *Vis viva*, not the quantity of motion, is the amendment of Leibniz; and it has this advantage, that for the demands of physical theory we must not go beyond the sphere of physics. Theological considerations are out of court in physics, which must be allowed to proceed on its own path, to its own goal unhindered and unhampered by considerations derived from other spheres of thought. Physics has a right to its own method, its own assumptions, its own axioms, and its own conclusions—only, let it recognise that these are valid only within the sphere of physics.

Looking away from the theological reasons which are set forth by Descartes as the formal reasons for his assertion of the constancy of action in the world, we must recognise that the general laws of nature formulated by him were a great advance on what had gone before. It was something to establish the law of inertia, in however imperfect a form. It was something gained to invite men to account for changes within the world by causes always in action, and acting regularly and constantly. This was the great contribution of Lyell to the geological theory, that the causes now in operation were also the causes that had been in action through all geologic time. It is the first

principle of science, and theology and philosophy are as much interested in the acceptance of it as science is. Hooker and Butler established this claim for theology ; only, many have not seen it, or have ignored it.

Though based on wrong data and inexactly stated, yet the recognition of something constant in the world, and that force is needed to change of state of a body, and that unimpeded motion is in a straight line, implied that the explanation of nature must not appeal to occult or mysterious powers, that the changes of nature are really exchanges. Yet this claim has its limits. For one thing, physics must not make its method universal ; it must not think that it can solve all problems by an extension of the physical method. This attempt was, as we have seen, made by Descartes ; it is made to-day in many quarters. Quantitative relations are not everything, even in physics. There are differences in matter, though it is true of matter in all its forms that it is subject to the law of gravitation. The fact of energy is due to the differences in state and position between one kind of matter and another. In other words, matter has not that simplicity attributed to it by Descartes. It has qualities or properties which cannot be brought under the characters of extension, divisibility, and mobility. Here he proceeds, not by analysis, but by abstraction, and when he limits matter to extended substance he is simply attributing reality to an abstraction, and is as scholastic as any schoolman. Nor did he make a critical examination of the qualities of matter in order to prove that the primary qualities are not as subjective as he thought the secondary qualities to be.

What are the fewest and simplest assumptions,

which, being given, will also explain for us the whole of nature? It would almost seem that Descartes had asked himself this question, and that his system is the answer. From the simplest and most intelligible phenomena to the more recondite and the less intelligible, that is his procedure. To explain the distant and the unknown by the near and the known is surely a wise procedure. This he endeavoured to do. He found that it was conducive to clearness and precision of thought to think of movements as the motion of parts of a machine. In this notion he was not alone. Lord Kelvin, for example, tells us that he is never sure that he understands anything till he has made a model of it. Descartes, too, liked to make models and diagrams of things, and the diagrams in the work on the *Principles of Philosophy* are full of interest.

On them, however, we need not dwell. Matter and motion arose simultaneously, and the matter of the universe was supposed to be in motion about fixed centres. These centres were in comparative rest, and the larger masses as they whirled round came into contact, and friction arose. With friction smaller parts were rubbed off, and collected at the centres. Thus the larger bodies might be conceived to become larger, and the smaller become less. Thus the smaller bodies might lose their independent action, be carried into the eddies which lay between the larger bodies. In this way he explained the position of the earth, and was able to say that the earth was at rest, though he believed that it moved round the sun. By this theory of vortices he sought to explain many of the properties of matter, and did so to his own satisfaction.

After all drawbacks, it contains the germ of the

mechanical theory of the universe. Taken up by Newton with larger knowledge and deeper insight, it advanced through Kant and Laplace till, in many quarters, it is the accepted theory of the hour. Huxley is justified in making the claim on behalf of Descartes, that he is the father of the modern mechanical view of the universe. There is no doubt that it has been a successful working hypothesis. It has enabled one to have a firm grasp of the great thought of the unity of the universe. It was something to be able to say that all matter attracts all matter directly as the masses, and inversely as the square of the distance. All matter gravitates, whatever be its state or temperature. It was something also to be able to say that matter is one in the fixed stars and on the earth; and many other conclusions have followed, the chief being that the universe is one system, existing in one space and in one time.

On the other hand, there are many things which prove that the world is not a mere mechanical system. It is a world with life in it, with intelligence in it, and the system of the world is one which needs a wider unity than can be reached on a mechanical theory. Mechanism itself needs to be explained. In fact, the mechanical view needs to be supplemented even in the physical world. Descartes erred on account of the excessive simplicity of the principles he assumed as laws of nature. It may be said that modern physics errs in the same way. We take up a book of mathematics or dynamics, and we find ourselves in a very intelligible world, a world of validity in certain directions, but it is an abstract world. We begin with points which have position but no magnitude, lines

which have length without breadth, surfaces which have no depth, and we deal with these abstractions according to logical laws. We are conscious all the time that these have no counterparts in the world of real objects, and we make allowances when we apply our mathematics to the world of objects.

We pass to the world of motion and we begin with abstraction again. We represent forces by lines. We make our laws of motion, and we deal with matter as if it were altogether inert, moving only as it is moved. Yet all the while we know that energy arises out of the inter-relations of matter, and is constantly associated with matter. We take the greatest possible liberties with the problems set to us by the inter-relations of matter. We postulate perfectly rigid levers, fulcrums that will not yield in the slightest degree, and work out our calculations with these abstract aspects of things. It is wonderful that we have been so successful in our endeavour to think out the order of the world. Think of what the physicist neglects. Read the treatises on the dynamics of a particle, and what wonderful constructions they are; and yet the particle has only one property, namely, the capacity of being moved. It is the aim of the physicist to express all the relations of matter in the abstract forms which he has himself thought out, and which he has expressed in a form with which he can work. Is there not too much simplicity in our formulæ? Descartes abstracted from matter all its qualities, and sought to explain the world of matter from extension, divisibility, and mobility. Is there much difference between this attempt and the attempt to deduce material phenomena from the play of inertia

involved in the motion of a structureless primordial fluid? It is the snare of the physicist to reduce the manifoldness of nature to a simple unity of scheme. Their goal is, it is so set forth by some of them, to discover the dynamical laws of the relations of matter, and fully to express them in terms of number, space, and time. They hope to be able to make all physical phenomena such as may be expressed in pure mathematics.

It is remarkable, also, that those who thus express their hope and endeavour are precisely those who lay stress on experiment, and who affirm that it is from experience and experiment alone that a knowledge of nature is to be obtained. It is most interesting to read the writings of physicists when they ride their theoretical hobby, and note their hope of finding a mathematical formula wide enough to express the law of the universe. It is more interesting to read accounts of the scientific work of these men in the laboratory, to note the care, the precision, the exactness of their methods, their determination to see nothing but what is there, and to state exactly what they observe. We read their works as they describe the process by which they discover argon, helium, and other elements of matter, and describe for us the unique characters of these elements. It looks as if we were in the company of two sets of men. But they are one. Only, the one is dealing with abstractions, and the other is dealing with concrete reality. Rather, it is the same man in two moods. May we not say that there is a double movement of science,—one to the finding of wider and wider laws, another to more and more definite description of particulars?

We may make another remark: that the hope of the mathematician that he will find the ultimate data of the physical universe to be number, matter, space, and time is a most touching instance of his faith in the intelligibility of the universe. He has found that he can think most clearly when he expresses himself in mathematical formulæ. They are to him what clear and distinct ideas are to Descartes, and we need not blame him if he hopes to translate concrete matter into mathematical formulæ. There are, however, other forms of reasoning perhaps more adequate to the problem. It may truly be said of Descartes that he transformed the problem of philosophy and set it anew for subsequent thinkers. He demanded the removal of all presuppositions. Accept nothing that may be questioned, and, if questioned, can still be established by a clear necessity of thought. Then he set up the principle of self-consciousness, the pure Ego, as the principle of certainty, and affirmed its existence as the principle of knowledge and of being. He brought into clear consciousness the opposition of being and thought, of mind and matter, of consciousness and existence, and thus set to philosophy the problem of their existence and of their relation. But he failed to carry out the principle of his method, and he, contrary to his own method, accepted, without adequate analysis, the substance of mind, the substance of body as given. The concept of substance he finds ready to hand, and, without further investigation, accepts it as the corner-stone of his system. The three substances—self, matter, God—he accepts uncritically and, it might be said, empirically. Then he defines mind and body in such a way as to make

any rational relationship between them impossible. They are only united as a matter of fact, but the fundamental dualism remains unreconciled. But he set the world a-thinking, and the answers to the questions he raised form the history of modern philosophy.

CHAPTER VII

Problems of the Cartesian Philosophy—The Place of Malebranche—Spinoza—His Personality—The Poetry of his System—His Character—His People—The Aim of his Philosophy—His Birth—His Training—The Influences which moulded him—Separation from Judaism—Friends and Correspondents—Residence at Rhynsburg and at Amsterdam—His Works—His Manner of Life—His Death.

DESCARTES raised many questions and gave occasion to many problems, the answers to which and the solutions of which he did not see or foresee. He left unclear the relation of will and understanding, the relation of soul to body, and the relation of God to both; in fact, he left to his successors a legacy of unsolved problems closely connected with the fundamental principles of his philosophy. For one thing, his definition of the nature of mind and of the nature of body made it impossible that there should be any interaction between them. As soon as his successors grappled with this problem they saw this result, and Cordemoy and Geulinx stated this conclusion frankly, while the latter drew the further conclusion that the changes of mind and body were also inexplicable. It is not our purpose to trace the development of Occasionalism, though it was the inevitable outcome of the principles of Cartesianism. Nor can we trace the application of Cartesian principles to

the special problems of the intercourse of soul and body, of the relation of understanding and will, nor to any other of the special problems arising directly out of the Cartesian principles. The development which these principles received from Malebranche is interesting in itself, and has some significance in the history of human thought, but we must pass it by. Simply to state the outcome of the speculation of Malebranche would be unsatisfactory, while to describe it adequately would far exceed our limits. So we simply say that Malebranche applied the principles of the Cartesian philosophy to a number of particular problems, and prepared the way for a more incisive examination of them. We seem to be able to see the full meaning of principles only when we have drawn out the consequences that flow from the complete acceptance of them and the application of them to all relevant problems. This is one of the functions of Malebranche in the evolution of the Cartesian philosophy, and he has done it well.

We shall endeavour to trace the attempt to develop the Cartesian principles and to make them a complete representation of existence. This was the work of Spinoza, one of the most interesting of human figures and one of the most fascinating of thinkers. His works are not only a philosophy—they are also works of art; one might say, looking away from the form of them, and looking only to their spirit, they are poetry. They must be judged accordingly. If we look merely to the form of his works, or to the speculative principles of which they are the expression, we must express on them a judgment of their inadequacy; if we read ourselves into the poetry which lies within them

we shall find ourselves so far in sympathy with Goethe, Schleiermacher, and others who were penetrated with the spirit of the wholeness of the whole which is the essence of the system of Spinoza. One can hardly read Spinoza in cold blood: his spirit penetrates us; we feel the influence of his spiritual energy, and, protest as we may, we are carried away by the current of his thought, and we find ourselves attempting to give a meaning to his system which will not contradict our own fundamental principles. There is the terrible earnestness of the man, his serious endeavour to find unity in thought and in things; there is his tremendous purity, which is ever present to the reader. There comes in the later books of the *Ethics* the time when the stream overflows its boundaries, and the mere abstract substance with its two manifested attributes seems to pass into the background, and a being not unlike the Jehovah of the Hebrews takes its place, and we find that it is not unreasonable to be penetrated with the intellectual love of God.

Again, as we near the end of this wonderful book, a higher ideal of man seems to emerge; how we can hardly tell, yet a figure of man appears which seems to have a transcendent worth, and has some kind of immortality, — something which seems to transcend space and time, and to need eternity for the realisation of man. No one can read the last three books of the *Ethics* without emotion of the most piercing kind, nor can they be read without the conviction that Spinoza, the man and the Hebrew, has so far parted company with the philosopher, the mere abstract thinker and the man of speculative thought, and that the spirit of the Hebrew people within him has gotten the victory.

Spinoza is one of many instances of the influence on thought of the principle of cross-fertilisation. We may go far back to the book of the Son of Sirach for its first illustration, and we may find illustrations in Philo-Judæus, in Maimonides, and in others in whom the abstract power of speculative thought was united with the intensity, the moral earnestness, and the ethical intuition of the Jew, to produce those works which have not been without influence on the progress of human thought. What is Christian theology but another illustration of the union of Aryan thought with the spirit of Hebrew life and thought? If ever thought has wedded fact, it has been in the union of Greek thought with the spirit of Hebrew life, where the dialectic method of Greece has been applied to the elucidation of the Hebrew doctrine of God, man, and the world.

Spinoza was a Hebrew, and the intensity of the Hebrew is present in all his works. It may not be possible to trace the influence of Hebrew thinkers on his system of philosophy, nor to prove his indebtedness to particular thinkers of the Middle Ages, but the general influence of race and nationality is clear. Nor could the general training of his people and the life of the school and the synagogue have been without influence on him. The long tradition of his people, their wondrous history in the past of long ago, and their lot in times of persecution in the ages of Christianity must have had their influence, even though at an early period the Jewish interpretation of that history no longer commended itself to his mind. The very effort by which he placed himself outside of the Jewish community was so far the measure of its influence on

the development of his mind. The past of the race of a man, the achievement of a man's people, cling to him, and have an influence beyond the operation of his conscious thought and outside the influence of his speculative principles. So Spinoza, the Jew, inherits, almost without his knowledge, the spirit of the Hebrew prophets, and this spirit appears in the overflowing of his ethical system in the concluding books of the *Ethics*. The spirit of the prophets appears also in his ability to bear solitude, in the power of being content with his own ideal of character and conduct, in the capacity of taking his own way in response to the inward call, unhindered by opposition, not deterred by calumny, resolved to think what seemed to him to be true, and to do the right and follow the good, gainsay these who might.

All men may join in admiration of his character and conduct; even those who look at his system as false, dangerous, and altogether inadequate as a theory of life and as an interpretation of experience. Even from his system we may learn something, and what we learn may be of abiding value. We may learn that unity we must seek after until we find it. We must find an interpretation of our experience which shall do justice to all the elements of it, and which, at the same time, will represent it as a unity and as a system. This was the endeavour of Spinoza. He occupies the central position in the thought of the seventeenth century. All the tendencies of the time seem to meet in him. He has affinity with all of them. The scientific movement of the Renaissance is within him as a passion, and he responds to it in every fibre of his being; the mysticism of the Middle Ages and the mysticism of the Hebrew people are in

him. He seeks to think clearly and to know the principles which inform all things, but he thinks these out mainly for the guidance of life and for the interests of conduct. All these diverse interests meet in him, and he seeks to bind them all into the organic unity of a logical system. Nor is the bond an external one, nor is the unity that of a barrel held together by hoops. This is the characteristic of the other systems of that century. Principles are held together by external bonds; Spinoza sought for an inward bond of unity by which the new knowledge of the world and of man could be wrought into a system. It was a great aim, and a worthy ambition to which he devoted his life. What if the attempt was a failure, what if his principles did not do justice to all the interests concerned, still to dream of such an enterprise was symptomatic of greatness. He sought to conserve the reality and independence of the spiritual, while doing justice to objective world order. He sought to make the external and the internal one, with a common movement wide enough to explain them both. That the principle which was operative in the whole world order, as such, should be the principle which could explain the persistence of each thing in its own particular mode of being, was his main thought; and surely it was a great conception. He was driven to think, to speculate, to work from the pressure of the inward need for clearness and comprehension of himself and of the world in which he lived. Problems worried him till it was easier for him to work at their solution than not to work. Nor was he content with vague thinking; he laboured at the expression of his thought, as a poet labours to find

a fit expression for his poetry. Of these things we shall have abundant proof as we proceed.

Benedict Spinoza was born at Amsterdam on 24th November 1632. His parents were Spanish Jews, who had fled from Spain to avoid the rigours of the Inquisition. He received the usual training of a Jewish boy of the time. Such training gave him a knowledge of the traditions of his fathers, made him acquainted with the Hebrew Scriptures, with the Talmud, and with the Jewish philosophy of the time. Many questions and problems would thus be brought before his mind. In all likelihood the mediæval Jewish philosophy and the speculations arising among the Jews may have come to his knowledge. Traces of the influence of such speculations are to be found in his works, yet the evidence is not direct, and the question is more curious than important. It is clear enough that the intensity and definiteness of the Hebrew thought about the oneness of God, which had been the ancient heritage of his people, influenced him, and helped him to the emphasis which he laid on the conception of God as the one infinite Being, in which all things lived and moved and had their being. This mystic tendency towards the unity of the One-and-all is the centre of all his striving, and towards the adequate expression of it he gave all his strength.

He did not limit himself to the instruction he could receive from the schools of his people. He set himself to acquire the new learning of his age. He studied natural science and the humanities. A new world had opened to the view of the people of that age. Knowledge was increased, and it was accessible to all who sought it. Spinoza received instruction in Latin

from Van Ende, a physician, and the command of Latin was the passport to all the learning of the time. According to the statement of his biographer, Colerus, he gave himself up to the study of physics. He may have read the works of Giordano Bruno, as there are some coincidences between his writings and those of Bruno. It may have been from Bruno that his desire to unite the religious ideas which he held as Jewish with the scientific conception of nature found a way to satisfy itself. From his scientific studies he reached the scientific conception of nature, a conception which was not a Jewish inheritance. The Old Testament has no conception of nature, and the conception of nature as such is mainly due to the influence of the Greeks. But the conception of God—the Eternal, the Unchangeable, the One—was essentially a Hebrew idea, and belonged to Spinoza as part of his heritage. So great was the Hebrew conception of God that in the light of Him the world tended to disappear, and the whole system of second causes tended to lose even their relative independence. The task of Spinoza thus defined itself for him,—how to unite the conception of God with the conception of nature, and how to state that union so as to keep the essential characteristics of both conceptions.

Of the range and extent of his studies we can have only a faint knowledge. M. Joël (*Beiträge zur Geschichte der Philosophie*) makes out a good case for the probability that Spinoza had profoundly studied both Jewish theology and Jewish law, and that these had a profound influence on his thought. There are good grounds also for the belief that he was acquainted with the scholastic philosophy,

from the use which he makes of scholastic terms and arguments in the *Cogitatio Metaphysica*, published as an appendix to his exposition of the Cartesian philosophy. Later, Spinoza became acquainted with the works of Descartes, Bacon, and Hobbes, and it is evident that he was a wide reader and diligent student of the works of other people. His work is no system in the air, it has its roots deep down in the history of human thought; if he gave to it a form personal and original, it must be remembered that every great system of philosophy has this personal element. Every great system of philosophy is a synthesis of the impersonal and the personal,—the impersonal being the human achievement of the past, the personal being the unique product of the man who gave the system its content and form.

As the result of his study and reflection Spinoza could no longer live within the system of life and thought which satisfied his kinsmen. He came to doubt the Jewish philosophy, the Jewish religion, and the Scriptures. Every year led him further and further away from the life and beliefs of the synagogue. The authorities began to suspect him, they attempted to keep a youth of such promise attached to the synagogue, and offered him a yearly pension if he would agree to abide with them. He rejected the offer, nor was he influenced in the desired direction by the attempt of a fanatical Jew to assassinate him. Matters came to a crisis in 1656, when he was solemnly expelled from the Jewish congregation. He was also compelled to leave Amsterdam. He lived for a time in the neighbourhood of Amsterdam. In accordance with the time-honoured Jewish custom,

that every Jew should learn a trade, he had learned the business of polishing optical glasses, and this served now as means for earning a livelihood. For a time friends in the town fetched the glasses to town and sold them for him. He was not without attached friends. He had little sympathy with the fanaticism of the Jews, and less with the fanaticism of the Protestants and Roman Catholics of the time. He wanted quietness and rest for the ordering of the thoughts regarding man, the world, and God, which were crowding in on him; and at this quiet time he wrote his tract, *Tractatus Brevis de Deo et Homine, ejusque Felicitate*.

There was little in the aspects of the time or in the ordinary pursuits of men to attract a man whose chief need was knowledge, and whose chief desire was to unite himself with the permanent and unchangeable, and to look at all things *sub specie eternitatis*. To live for knowledge, to think out all his thoughts into perfect clearness, had become his chief aim and his highest satisfaction. The *Tractatus* is of significance mainly for the light it casts on the development of the system of Spinoza. Lost sight of for some time and discovered in a most interesting manner, this treatise shows us Spinoza on the search for a method, and on the way towards the expression of his fundamental principles. It shows the influence of Descartes on the mind of Spinoza. The ontology, the method, the psychology, and the view of the passions are largely those of Descartes. The variations from Descartes are nevertheless significant. He accepts Determinism, regards the possible as actual, makes nature one with God,

and these deviations show us the author moving away from Cartesianism to his own system.

In the year 1661 he moved to Rhynsburg, a small town near Leyden, where he dwelt for two years. Outwardly uneventful, they were significant for the progress made by him towards the completion of his system. Determinism was the keynote of his system. All things determined by fixed sequence and ruled by one method, so that all the phenomena of experience might be seen in their unity—this was his aim. Ontology, ethics, physics, politics are parts of one organism, ruled by one principle, informed by one method. Having come to this view, the question arose as to the best method of exposition and the best order of thought. This need led him to a deliberate study of method, the result of which we find in the unfinished treatise, *De Intellectus Emendatione*. He was influenced also in the study of method by the necessity of teaching. He had to teach one of his friends, Albert Burgh, in the Cartesian philosophy. He selected the second part of Descartes' *Principles*, and part of the third, and resolved to treat these synthetically after the geometrical method; and this experiment, with its apparent success, probably had some influence on his resolve to cast his great work into this synthetic form. The *Principia Philosophiæ Cartesianæ*, with an appendix *Cogitata Metaphysica*, were published in 1668, under his own name.

As to the men who were in intimate relationship with Spinoza at this time, we find some information in the correspondence. Albert Burgh was a pupil of Spinoza, who afterwards became a Roman Catholic,

and wrote to his master a curious letter which met with a crushing reply (Ep. 76). Another was Heinrich Oldenburg, of Bremen, who came to England as Consul under the Protectorate. Oldenburg was friendly with many distinguished Englishmen, was acting secretary of the Royal Society, and editor of its *Transactions* for a time. He had many interests, was full of curiosity regarding scientific and philosophical matters, and, though not of great faculty himself, yet had a desire for the company of great men. The first letter of the correspondence is from him to Spinoza. In it he speaks of the conversations they had at Rhynsburg—of God, of extension, of infinite thought, of the differences and agreements between these, of the nature of the connection between soul and body, and of the principles of the Cartesian and Baconian philosophies. As these conversations were only *quasi per transennam et in transcurso*, he desires fuller information mainly on two points: first, as to the true distinction between mind and matter; and, second, as to the chief defects of the Cartesian and Baconian philosophies. The answer of Spinoza is of great interest, for it encloses definitions, axioms, and the first four propositions of Book I. of the *Ethics*. It defines the idea of God and describes Substance and Attribute, and finally criticises Descartes and Bacon. This letter shows that Spinoza had studied the works of Descartes and Bacon, that he was, in fact, in the full stream of the New Learning. He thinks that Descartes and Bacon have strayed too far from the knowledge of the First Cause and the origin of all things; that they do not recognise the true nature of the human mind, and have not grasped the true

nature of error. Had they trained themselves rightly they would have discerned the need of correct knowledge on these three points. His criticism concentrates itself on Bacon. Bacon does not prove, he simply narrates; Bacon assumes that the intellect errs, not merely because it is deceived by the senses—it is fallacious in its very nature (*sua sola natura*); intellect fashions (*fingit*) all things from the analogy of its own nature, not after the analogy of the universe. Intellect mixes its own nature with the nature of things. Further, Spinoza accuses Bacon of holding that the intellect is prone to abstractions, and such things as are in a flux it feigns to be constant; and, finally, that he is unfair to the nature of intellect, because he affirms of it that it is in a constant movement, and is unable to stand still or to be content.

The final criticism is worthy of mention. It refers to the Cartesian principle that the will is free, and more extensive than the intellect, or, in the words of Bacon, "the understanding is not a dry light, but receives infusion from the will." It is characteristic of Spinoza that he should affirm that will in general differs from this or that particular volition, precisely as whiteness differs from this or that white object, or humanity from this or that man. Will is merely an entity of the reason, and cannot be called the cause of particular volitions, and as these need a cause the will is not free. Thus we learn that in 1661 the main features of his system were already fully thought out.

The years of his residence in Rhynsburg were fruitful years: he had come to conclusions regarding method, he had applied the method to its objects; in short, he found that the rules of knowing and the

nature of the things known were mutually involved, the one implied the other. The *De Intellectus Emendatione* was the exposition of the formal rules of knowing. The *Ethica* was the application of them to the elucidation of reality, as it appeared to Spinoza. In 1663 Spinoza removed to Voorburg, a village about two miles from Amsterdam, where he dwelt until 1670; afterwards he resided in the Hague itself, till his death in 1677. During this period he made many friends and many enemies. Of his friends we have already named Oldenburg, and of the others the ablest and most conspicuous was Ludwig von Tschirnhausen, a Bohemian nobleman, whose work in science is of worth and whose philosophic ability was of value.

In 1670 the *Tractatus Theologico-Politicus* was published anonymously, and met a fierce reception. Into the history of that reception it is not necessary to enter, nor at present into the merits of the book. The book was prohibited by the States-General, and was placed on the Index of the Church of Rome.

Of curious interest is the correspondence between Spinoza and Oldenburg, which may be read in the Van Vloten edition of the works of Spinoza, vol. ii. Being secretary of the Royal Society, and interested in all the work of the society, Oldenburg tells Spinoza of the work. He sends him the latest scientific news and the most recent discoveries in physics. The criticisms of Spinoza are instructive, as they illustrate the weakness of mere deductive reasoning as applied to matters of fact, and the need of ascertaining what the facts are. The experiments of Boyle are not appreciated by Spinoza, and the deductive reasoning of Spinoza does not appeal to Boyle. Yet the reasoning of Spinoza is

acute, and the letters are full of interest. The physicists have gotten them the victory, but Spinoza has had his revenge, as the physicists nowadays are not content till they bring all the movements of nature within the sweep of one magnificent formula. Physical science aims at deduction as its goal.

In 1673 the Elector Palatine offered to Spinoza a professorship of philosophy at Heidelberg. It was declined, and the reasons of declinature may be quoted. "I have been unable to induce myself to accept this splendid opportunity, though I have long deliberated about it. I think, in the first place, that I should abandon philosophical research if I consented to find time for teaching young students. I think, in the second place, that I do not know the limits within which the freedom of my philosophical teaching would be confined, if I am to avoid all appearance of disturbing the publicly established religion. Religious quarrels do not arise so much from ardent zeal for religion, as from men's various dispositions and love of contradiction, which causes them to habitually distort and condemn everything, however rightly it may have been said. I have experienced these results in my private and secluded station, how much more should I have to fear them after my elevation to this post of honour" (Letter 54, Elwes' Trans.).

The desire to devote himself altogether to philosophy, and the resolve to say the thing he saw and nothing else, determined his path. He continued to live at the Hague, first in the house afterwards occupied by Colerus, his biographer, and afterwards in a less expensive house. The last five years and a half of his life were spent in the quietest possible way, ready to

receive all who called on him, but declining to visit in turn.

He had friends who came to see him, and were ready to provide for his comfort, had he allowed them. The brothers De Witt, who were so rudely treated by their countrymen, were among his friends. Glimpses of distinguished visitors are obtained, the most distinguished of whom was perhaps Leibniz. Of the relations between them, of the fact that Leibniz called on him, that he had read the *Ethica*, and that he had thought deeply on the problems of the system of Spinoza, much might be said were there space. The main thing here is to note the quietness of his declining years, and his mental activity. He continued to brood over the problems of existence while life lasted. In some ways his was an ideal life. He was almost idolized by the family with which he lived. Colerus tells us: "If he was very frugal in his way of living, his conversation was also very sweet and easy. He knew admirably well how to master his passions: he was never seen very melancholy, nor very merry. He had the command of his anger, and if at any time he was uneasy in his mind, it did not appear outwardly; or if he happened to express his grief by some gestures, or by some words, he never failed to retire immediately, for fear of doing an unbecoming thing. He was, besides, very courteous and obliging; he would very often discourse with his landlady, especially when she lay in, and with the people of the house when they happened to be sick or afflicted; he never failed then to comfort them, and exhort them to bear with patience those evils which God assigned to them as a lot. He put the children in mind of going

often to church, and taught them to be obedient and dutiful to their parents. When the people of the house came from church he would often ask them what they had learned, and what they could remember of the sermon. He had a great esteem for Dr. Cordes, my predecessor; who was a learned and good-natured man, and of an exemplary life, which gave occasion to Spinoza to praise him very often. Nay, he went sometimes to hear him preach, and he esteemed particularly his learned way of explaining the Scriptures, and the solid application he made of it. He advised, at the time, his landlord and the people of the house not to miss any sermon of so excellent a preacher. It happened one day that his landlady asked him whether he believed she could be saved in the religion she professed: he answered, your religion is a good one, you need not look for another, nor doubt that you may be saved in it, provided that whilst you apply yourself to piety, you live at the same time a peaceable and quiet life" (quoted from the Appendix to Sir F. Pollock's work on Spinoza, pp. 420, 421).

From his own writings we may gather the expression of those principles which he wrought into his daily life. "Assuredly nothing forbids man to enjoy himself save grim and gloomy superstitions. For why is it more lawful to satiate one's hunger and thirst than to drive away one's melancholy? I reason, and have convinced myself as follows: no deity, nor any one else, save the envious, takes pleasure in my infirmity and discomfort, nor sets down to my virtue the tears, sobs, fear, and the like, which are signs of the infirmity of spirit; on the contrary, the greater the pleasure wherewith we are affected the greater the perfection whereto we

pass; in other words, the more must we partake of the divine nature" (*Ethics*, Part IV. Prop. 45, Note, Elwes' Trans.).

Lest this should be misunderstood we ought to carry with us Spinoza's doctrine of pleasure, which we shall see by and by. We make another quotation, as it casts some light on the practical ethics of Spinoza. "He who, guided by emotion only, endeavours to cause others to love what he loves himself, and to make the rest of the world live according to his own fancy, acts solely by impulse, and is therefore hateful, especially to those who take delight in something different, and accordingly study, and by similar impulse endeavour, to make men live in accordance with what pleases themselves. Again, as the highest good sought by men under the guidance of emotion is often such that it can only be possessed by a single individual, it follows that those who love it are not consistent in their intentions, but, while they delight to sing its praises, fear to be believed. But he who endeavours to lead men by reason does not act by impulse, but courteously and kindly, and his intention is always consistent. Again, whatsoever we desire and do, whereof we are the cause in so far as we possess the idea of God, or know God, I set down to religion. The desire of well-doing which is engendered by a life according to reason I call piety" (*Ethics*, Part IV. Prop. 38, Elwes' Trans. Note I.).

In his self-command, in his regard for the welfare for others, he carried out in practice the precepts he had set forth so admirably in the later part of the *Ethics*. Of that teaching we shall speak later. Meanwhile let us note how the days passed in quietness,

with its meditative work interspersed with manual labour, each in harmony and measure. His health failed; indeed, he had never been strong. He had suffered from consumption, and for many years had to live almost by rule. The end came suddenly and quietly; he died in February 1677. It was a strenuous life that he had lived. Stern and lonely was his lot; the victim of persecution during his lifetime, his fate in the history of philosophy is not unlike that of his earthly life. Fierce have been the criticisms passed on his system of thought, strong have been the denunciations directed against him and his works. But the defence has been as keen as the attack. He was for a century more denounced than read. The *Aufklärung* had little sympathy with Spinoza, his thought was not transparent to the Illumination. But on the revival of philosophy, and on the agitation of its deeper principles, Spinoza came to the front, and his system won the admiration of poets like Goethe, men of literature like Schiller and Lessing, and of the greatest philosophers of the golden age of philosophy in Germany. Nor were there lacking theologians who found that they might learn something from him. Schleiermacher found much to admire in his life and work, and Dorner recognises that his work had some significance for theology.

CHAPTER VIII

De Intellectus Emendatione—The Search for a Method—The Rules of Method—True and adequate Ideas—Ideas and Abstractions—Definition—The Understanding—Properties of the Understanding—General Laws—The Order and Connection of Ideas, and the Order and Connection of Things—Causality—Hume—Degrees of Knowledge, perfect Knowledge.

THE method of Descartes was a measure devised by him in relief of doubt. By the application of rigid doubt to every conviction, he sought to arrive at a principle which could not be doubted. He was in search of certainty, and he seemed to find it in the *Cogito, ergo sum*. Having found his principle, he used it as the source and criterion of knowledge. Thus his procedure was intellectual, not ethical; and ethics was scarcely touched by him. Spinoza has also had his voyage of exploration; but he is in search of another goal, and has a different vision in his mind. Descartes sought a principle of certainty; Spinoza sought for the good. His *Treatise de Intellectus Emendatione* has the place in his works which the treatise on Method has in the work of Descartes. It has a sub-title, or an addition to the title, *Et de Via, qua optime in veram rerum cognitionem dirigitur*—How the Intellect may best be guided to a True Knowledge of Things. But a true knowledge is desirable in order

that men may obtain the true and final good. The opening pages of the *De Intellectus Emendatione* describes the ordinary objects of men's desires, and proceeds to an appreciation of the true and final good. Spinoza wishes to direct all sciences to one aim, one end: to wit, that men may reach supreme human perfection. This is the highest good ever to be sought after; and all science and research are of value just as they serve this great end. It is no doubt true that good and bad, perfect and imperfect, are relative terms, and that nothing in its own nature can be called perfect or imperfect, for all things come to pass according to the eternal order and fixed laws of nature. But, he continues, human weakness cannot attain to this order in its own thoughts; but man can conceive a human character much more stable than his own, and he may acquire such a character. Everything that is a means towards the acquisition of a perfect character is good. And the chief good is, that he should arrive, together with other individuals, if possible, at the possession of this character. Knowledge is a means to this end, specially the knowledge of the union existing between the mind and the whole of nature. "This, then, is the end for which I strive, to attain to such a character myself, and to endeavour that others may understand even as I do, so that their understanding and desire may entirely agree with my own. In order to bring this about it is necessary to understand as much of nature as will enable us to attain to the aforesaid character, and also to form a social order such as is most conducive to the attainment of this character by the greatest number with the least difficulty or danger" (*De Intell. Emend.*, Elwes' trans., pp. 6, 7).

It is for this end, of the formation of character, that Spinoza sought for a means of improving the understanding and purifying it, so that it may apprehend things without error and in the best possible way. It is not too much to say, looking at all his works from first to last, that he never lost sight of this practical, ethical end—to form man to a perfect character. All our actions and thoughts must be directed to this one end. As men must guide their life, it is necessary to lay down some rules in a preliminary way, anticipative of experience, and to take these as provisionally good. These he sets forth, and the sum of them is, that we should speak so as to be understood by the common people, and comply with every general custom that does not hinder the attainment of our purpose; that we should indulge in pleasure so far as that is necessary for the preservation of health; that we should obtain only enough money as is necessary for the preservation of life and maintenance of health, and to follow such customs as are consistent with our purpose.

These provisional rules are to enable us to live while we are engaged in the task of amending the understanding and making it fit for its work. That work is, that we should know ourselves, and the world, in order that we may attain a perfect human character. The first step is to clear our minds from error. Passing by all our other needs, the great need is to fit us to understand things that we may attain to the supreme good. There are four ways of arriving at exact knowledge: (1) By hearsay or authority; (2) by mere experience; (3) by reasoning “when the essence of one thing is inferred from another thing, but not ade-

quately"; and, (4) by complete perception when a thing is perceived only through its essence. Having illustrated these different kinds of perceptions, he shows that the fourth kind of perception alone is adequate, because it alone can give us the whole nature of the thing perceived without danger or error. The method whereby we gain knowledge of the things we need to know, does not consist in assuming that we need a method to test the first method, and a third to supplement the second, and so on. In such a way we should never arrive at knowledge. It is with knowledge as it is with the making of tools: less perfect tools help to the making of the more perfect; so it is with the understanding. The mind, exercising its strength, procures intellectual instruments for its work, till it attains to wisdom.

The instruments with which we are endowed, and by the use of which more perfect instruments are fashioned, are true ideas. True ideas are self-evident. The method is not concerned with the origin of our ideas, or of how we come to possess them. The mind can think, and think truly. Method is the description of the way in which we apprehend in true thinking. We think truly when we apprehend things through their essential nature or through their proximate cause. After an exposition of the idea and its ideatum he concludes that the method is nothing else than reflective knowledge, or the idea of an idea, that there can be no method unless an idea exists previously. A method is good which shows how the mind should be directed according to the standard of the given true idea. He further assumes that the relation between two ideas are the same as the relation between the

realities corresponding to these ideas, and the reflective knowledge will have a value corresponding to the realities with which the ideas deal. Thus that method will be most perfect which affords the standard of the most perfect being by which we may direct our mind. As we acquire new ideas we acquire fresh instruments by which we may make further progress. Further, the mind apprehends itself better in proportion to the number of natural objects which it perfectly understands. The greater the number of objects which the mind apprehends and comprehends, the more perfect will the mind become; and the mind and the method of its improvement will become absolutely perfect when it attains to the knowledge of the perfect being. The more the mind knows, the better does it understand its own strength and the order of nature; as it increases in self-knowledge it can direct itself more easily, can lay down rules for its guidance, and by increased knowledge of nature it can more easily avoid what is useless.

Spinoza postulates as the beginning of the application of his method the truth of the fundamental idea. We cannot start unless with an idea which is itself true and the guarantee of its own truth. The test of truth is in the very act of thinking, for to think truly is to have in idea the real nature of the object of thought. He assumes that the true idea is in the same case as its correlate in the world of reality, and from this it follows that, in order to reproduce in every respect the faithful image of nature, our minds must deduce it from the idea which represents the origin and source of the whole of nature. Spinoza asks, at this stage, why should we prove this by

reasoning, seeing that it ought to be self-evident that we should direct our mind according to the standard of the true given idea? The objection to which he replies is, that we need to prove that our starting-point is a true idea; that proof would need a further proof, and so on. To which he replies, that if a man had acquired new ideas in the proper order, according to the standard of the original true idea, he would never have doubted of the truth of his knowledge, for truth would have made itself manifest, and all things would have flowed, as it were, spontaneously towards him. But this rarely happens, and he has been forced to arrange matters so that he may accomplish by reflection and reasoning what needed to be done. Further, for establishing the truth and valid reasoning, no other means are needed than truth and valid reasoning. Moreover, this needs keen and accurate discernment, and few men are so qualified. There are other obstacles, but, after all, we must start somewhere, and if any doubt of the primary truth and the deductions based on it, "he must either be arguing in bad faith, or there are men who are in complete mental blindness."

Leaving the further description of such sceptics, we find that Spinoza resumes thus. We have defined the end to which we desire to direct our thoughts; we have determined the mode of perception best adapted to aid us in attaining our ends; we have discovered the way which our thoughts should take in order to make a good beginning, to wit, that we should use every true idea as a standard in pursuing our inquiries according to fixed rules. The right method should provide a way of distinguishing true ideas from other perceptions,

should provide rules for perceiving unknown things according to the standard of the true idea, and should give us an order which would enable us to avoid useless labour. The method would be perfect when we attain by it the knowledge of the absolutely perfect Being.

How to distinguish true ideas from all other is the next step. Every perception is a thing, or of the "essence" of a thing. "Fiction" is concerned with things possible, not with things necessary or impossible. A thing is impossible when its existence would imply a contradiction, necessary when its non-existence would imply a contradiction, possible when its existence or non-existence could imply no contradiction. No fiction can contain eternal truths. I cannot feign that I do not exist when I know that I do exist. Fiction is concerned only with the possible; it has no place in dealing with truths that carry their evidence in their very nature.

At this stage Spinoza makes it clear that his use of the word "idea" marks its complete separation from mere general conceptions or abstractions. One cannot conceive the existence of Adam by means of existence in general,—“it would be the same as if, in order to conceive his existence, we went back to the nature of being so as to define Adam as a being.” The more existence is conceived generally, the more is it conceived confusedly. The more it is understood particularly, the more it is understood clearly. Spinoza aimed at the conception of concrete being, and endeavoured, not always successfully, to avoid abstractions. Passing to the consideration of the use of hypotheses, he lays down the position that he can feign as long as he does not perceive any

impossibility or necessity. He knows that the earth is round, but nothing prevents him from telling people that it is a hemisphere, or that it is like a half apple carved in relief on a dish. But we are unable to feign that we are not thinking when we are thinking, we cannot think of the soul as a square. Still, there is a legitimate use of hypotheses. We may use them as long as we have a clear and distinct perception of what is involved. He contends, however, that a fictitious idea is necessarily confused, and as all confusion arises from the fact that the mind has only partial knowledge, it follows that if the idea of something be very clear and distinct it must be simple. We may have clear ideas of a simple thing, we may also break up a complex into component parts, and so cause confusion to disappear. But fiction cannot be simple. In fact, Spinoza agrees with Mrs. Carlyle, "that the mixing up of things is the great Bad." Error is confusion, truth is self-consistent, simple and one-fold. Falsity consists in affirming of a thing what is not contained in the conception of the thing. On the other hand, simple ideas cannot be other than true.

The discussion of the nature of the false idea is followed by an investigation of the doubtful idea, and an inquiry into the sources of confusion, among which may be mentioned the use of the imagination. He distinguishes between the imagination and the intellect. "We think that what we imagine we understand, and what we more readily imagine is clearer to us." Thus we put first what should be last, the true order of progress is reversed, and no legitimate conclusion is drawn.

Passing to the second part of the method, he sets

before us the object aimed at. Having shown that the possession of clear ideas is the indispensable condition of progressive knowledge, the inquiry necessarily follows as to the acquisition of clear and distinct ideas, ideas which are the product of pure intellect and not of chance physical notions. His aim is to reduce all ideas to unity, and so associate and arrange them in the mind that they will reflect the order of nature and the reality of nature, both as a whole and as parts. For this end everything should be conceived, either through its essence or through its proximate cause. A self-existent thing is conceived through its essence only; a dependent existence must be understood through its cause. Thus we require to be careful not to confound that which is only in the understanding with what is in the thing itself. We need either some particular affirmative essence or a true and legitimate definition. A perfect definition must explain the inmost essence of a thing. That is, the definition must comprehend the proximate cause, and should be such that all the properties of that thing, in so far as it is considered by itself and not in conjunction with other things, can be deduced from it. As to the definition of an uncreated thing, Spinoza lays down these four rules:—(1) The exclusion of the idea of cause—that is, the thing must not need explanation by anything outside itself. (2) When the definition of a thing has been given there must be no room for doubt as to whether the thing exists or not. (3) It must contain, as far as the mind is concerned, no substantives that could be put into an adjectival form; in other words, the object defined must not be explained through abstraction. (4) Lastly, though this is not absolutely necessary, it should be possible to

deduce from the definition all the properties of the thing defined." Note should be taken of the first and third of these rules, as the first will enable us to understand what Spinoza means by the phrase *causa sui*, used in the *Ethics*, and the third is a testimony to Spinoza's thorough-going nominalism, and a testimony to his belief that he was not dealing with abstractions, but with the properties of real concrete being.

He has the conviction—it lies at the foundation of all his procedure—that when the mind devotes itself to any thought, so as to examine it and to deduce from it all the legitimate conclusions possible, any falsehood that lurks in the thought will be detected; if the thought be true, the mind will readily proceed without interruption to deduce truths from it. But the foundation must be sure. And therefore it can be nothing else than the knowledge of that which constitutes the reality of truth, and the knowledge of the understanding, its properties and powers. When we have acquired this we shall have a foundation from which we can deduce our thoughts and a path whereby the intellect, according to its capacity, may attain the knowledge of eternal things. Finally, Spinoza sets himself to inquire into the properties of the understanding. What is given is simply an enumeration of these properties, and with this enumeration the treatise abruptly closes. They are of unequal value, yet all of them are suggestive. "(1) The intellect involves certainty, it knows that a thing exists in reality (it is better in Latin): *Quod sciat res ita esse formaliter, ut in ipso objective continentur.*" (2) It perceives certain things, or forms some ideas absolutely, and some from others. (3) The ideas which the understanding forms absolutely ex-

press infinity, determinate ideas are derived from other ideas. (4) The understanding forms positive ideas before negative ideas. (5) *Res non tam sub duratione, quam sub quadam specie æternitatis, et numero infinito; vel potius, ad res percipiendas, nec ad numerum, nec ad durationem attendit: cum autem res imaginatur, eos sub certo numero, determinato duratione, et quantitate percipit* " (Van Vloten, vol. i. pp. 35, 36).

It may be conceded that Spinoza, in the unfinished work on method, was in search of those principles and presuppositions on which our knowledge rests. It is an attempt to interpret experience. He recognises that to content ourselves with the given, as it is given in time and place, and to accept the mere perception of these presentations as final, is not to have true knowledge, or adequately to interpret experience. This is a mere *experientia vaga*, as Spinoza calls it. Given things in mere time and place are not understood till they are seen as there, through the operation of a general law, and as an illustration of an order of things of which they are the particular expression. There is a definite inner connection in the things which are given, and the explanation of them is found in their connectedness. A beginning is made with the given, so Spinoza holds, for he remarks that we should always deduce our concepts from real things by following the sequence of causes as far as we can. A statement of matters of fact, and a statement of the principles and conceptions involved in the ongoing of matters of fact—this is the teaching of Spinoza. On the physical side there are the laws of motion, on the mental side there are the laws by which ideas are bound together, and in both cases there is the idea of conformity to law,

and it is the order in the particular facts and the law which regulates their happening that makes them intelligible. Law and order are the constant and eternal things on which mutable and transient things so depend, that they can neither exist nor be understood without them.

It is hopeless to try to understand the endless series of phenomena, they go on from number to number in an eternal regress; but true knowledge may be had, for it depends not on the endless series, but on the law which unites the series and makes it one. The series of phenomena are one thing, and the law of their causation is another, and it is on the latter that knowledge is based. He distinguishes in like manner between general laws, which are to him laws of real things, as real as the things, and mere abstractions, *abstracta et universalia*. The former are *entia realia*, the latter are only *entia rationis*. The former are objectively valid, the latter have validity only so far as it is a mental idea; it has no reference to reality. Truth and validity as applied to knowledge depend on the clearness and distinctness arising from perfect consistency. Error is possible only when the mind takes the part for the whole, when it attributes absolute worth to what is isolated and limited. Error will disappear as we move away from incorrect presuppositions and work our way onward with strict logical consistency. "Veritas norma sui, et falsæ est"—Truth is the measure of all things.

What guarantee have we that logical consistency shall give us truth and validity. Spinoza simply assumes that ideas represent reality, that the order and connection of ideas are the same as the order

and connection of things; we shall see this more completely when we read the *Ethics*, and we shall see the reason why Spinoza held that they were so. But the problem of knowledge as it burdens and perplexes philosophy to-day was not raised by Spinoza, though his statement really gave rise to it in the mind of others. The ultimate question of philosophy, in its epistemological aspect, is just the connection between the order and connection of our ideas and the order and connection of things. By what warrant do we assume that existence will follow the laws which are valid for the relations of our thoughts. Hume expressed the problem in his characteristic way, and his clarifying criticism has set the problem to philosophy to-day. "In short," Hume says, "there are two principles, which I cannot render consistent; nor is it in my power to renounce either of them, namely, that all our distinct perceptions are distinct existences, and that the mind never perceives any real connection among distinct existences. Did our perceptions either inhere in something simple and individual, or did the mind perceive some real connection among them, there would be no difficulty" (Hume's Works, vol. i. p. 559, Green and Grosse's ed.). This aspect of the problem never came before the thought of Spinoza. To him it appeared axiomatic that the presuppositions of our reason were also the presupposition of things; that our fixed and necessary ideas had eternal realities correspondent to them; that the objective world order corresponded to the order of our purified and rectified thinking. There are many forms of expressing this correspondence. It may be expressed

thus: that the necessary truths of reason are true alike of thought and things, or one might say that uniformity of experience has generated necessity of thought, just as we regard mind as formative of things or things as generative of thought. It is a problem whether we look at it as the problem of perception in the modern sense of that word, or as the problem of thought; and the various solutions of the problem are descriptive of the various schools of thought in the past and the present.

Spinoza did not reflect on the problem; indeed, it was not before his mind as a problem. He assumed that our thoughts corresponded to things, and that a necessity of thought represented a necessity of things; further, that the relations which hold between our thoughts hold between the objects of our thoughts. Why these should be so is not explained. It had led to Occasionalism, to the seeing of all things in God, and to many other forms of solution; but Spinoza calmly tells us that our first thought, from which all our thoughts are derived, corresponds with the first thing from which all other things are derived. The connection between the first thing and all other things is as real as the things themselves, so also with thoughts. The parallelism continues all along the line of things, and is complete, but it is assumed all the time that thought has wedded fact. Will thought relations hold among matters of fact? Logical relations hold in thought, how shall we extend them to a real world? Thought relations are true and valid as thought, but will they hold with regard to the particulars, or enable us to control phenomena and turn them to our uses? What is the relation between

thought and knowledge? The difficulty in question seems to have been present to the mind of Spinoza when he had before him the conception of the possible. The possible involves no contradiction. Just as Hume says: "The contrary of every matter of fact is still possible; because it can never imply a contradiction, and is conceived by the mind with the same facility and distinctness as if ever so conformable to reality. That the sun will not rise to-morrow is no less intelligible a proposition, and implies no more contradiction than the affirmative, that it will rise. We should in vain, therefore, attempt to demonstrate its falsehood" (Hume's *Essays*, vol. ii. p. 23, Green and Grosse).

The category of the possible, formally recognised by Spinoza, had really no influence on his thought. In the long run he eliminates it by the identification of the possible and the real, as we shall see. And in the meantime he regarded the possible as subject to causation, and causation is for him the fundamental concept of his philosophy. Substantiality is really causality, and substance is conceived as active. He accepts the notions of substantiality and causality as self-evident, ultimate, and as needing no further analysis. Again, he takes for granted conceptions the analysis of which has been the problem of successive generations of thinkers. He regards the law of causation as the source of our knowledge of real existence; while in reality his identification of causality with power makes the whole conception teleological and practical. Of this more in the sequel.

Causality being taken by Spinoza as real power, and particular things being taken as dependent on causation

for their existence and their particularity, he is able to eliminate the conception of the possible. For, after all, causation is of the same kind as the necessity by which we deduce conclusions from their premises. Ground and consequence, or the logical connection between premises and conclusion, are not temporal relations; they are eternal, constant, and permanent. Thus he construes, or endeavours to construe, the relation of cause and effect as something which exists out of time; and particular phenomena, regarded as the outcome of causation, are set in their fit place eternally. The temporal relation has no place in real knowledge. Reasonable knowledge takes place when temporal relations are overcome, and we look at things and their relations under some form of eternity.

It follows that if we have due knowledge of the cause, the knowledge of the effect duly follows. Cause and effect are so related to one another, that when the relation is fully unfolded the difference between the two falls into the background, and the effect is simply the unfolding of the nature of the cause.

Reasonable knowledge leads inevitably to the discovery of the eternal and the necessary in the world of things. This is the work of reason, and reason presupposes that eternal and necessary principles are to be found in the world of things. Yet this is not, according to Spinoza, the highest form of knowledge. In rational knowledge the antithesis between general laws and particular things is not overcome, and the matters of fact present some resistance to the laws of thought, and knowledge is not complete. Spinoza longs for a kind of knowledge by means of which

particulars will take their place in the system of things, completely interpenetrated with the constant and eternal laws of the universal order, and that each thing in its individual setting will give the universal order, and the universal order will give the particular thing. This kind of knowledge is intuitive, for in it there is no before or after, no particular or universal, no parts nor whole; for these distinctions are relevant only to imperfect knowledge, striving to reach its objects by means of comparison and inference, which in their very nature involve the possibility of mistake.

It is obvious that such knowledge is possible only to an intelligence which is absolute, unlimited, at the centre of things, and which has all possibility present to it as a real system. Such knowledge may be possible, but if so it has already overcome the antithesis of mind and matter, subject and object, and also the antithesis of time and eternity; and other distinctions with which finite minds work have ceased to have significance, and it is not possible for us to describe its nature and action. For Spinoza it appeared to be the crown of all knowledge; but for him it was also the fact that intuitive knowledge was real, because such knowledge was only the other side of being, the thought that reflected the actualities of being in its wholeness as a system of all possible existence. All the relations of being to itself, and of all attributes of being to substance, had their correspondent relationships set forth in the world of thought, and the *res cogitans* kept pace with the world of objects. Here there is no before and after; really, there is no question of the relation of *res cogitans* to the *res extensa*, of the *natura naturans* to the *natura*

naturata; for the *cogitans* has knowledge of all the possibilities of things, and sees them as actual. Nor is there any question of cause and effect either in the world of thought or of things, still less is there any question of influence of the one on the other. In this state of perfect intuitive knowledge all is known as it is, and is as it is known.

The tractate on the theory of knowledge was never completed by Spinoza. It is a suggestive treatise, so far as it is wrought out, and contains many things worthy of admiration. It shows that he had reflected deeply on the procedure of the mind in its search for knowledge, and it shows that he had a vivid apprehension of the hindrances which dogged its steps on its advance towards truth. He reflected on the assumptions made by the mind in its endeavour to understand existence. He reduced these assumptions to the fewest possible number, the fewest possible for him; but they remained unsifted, uncriticised by him, and were as dogmatically assumed by him as they had been by former thinkers. He treats them as realities, and he bases his system on them. Of them we shall speak presently, but it will be well for us to look for a little at his first systematic work, his *Exposition of the Cartesian Philosophy*, with its significant appendix, *Cogitatio Metaphysica*. We might look also, had we time, at the *Tractatus Theologico-Politicus*, not so much for its criticism of the Old Testament or for its religious worth, as for the light it casts on the principles of his philosophical system. For in it we see the principles in their practical application to history and to life, and we can thus understand them all the more clearly.

CHAPTER IX

Exposition of the Cartesian Philosophy—A Synthetic Exposition *more Geometrico*—Definitions—Axioms—Propositions—The *Cogitatio Metaphysica*—Ways of Thinking—The Four Kinds of Being—Affections of Being—The Necessary, the Impossible, the Possible, and the Contingent—Freedom of the Will—Time and Eternity—Good and Evil—The Attributes of God—The Nature of Man.

THE *Exposition of the Cartesian Philosophy*, published in 1663, was prepared by Spinoza for the use of a pupil living with him while his residence was at Rhynsburg. It is based on the second part of Descartes' *Principia Philosophiæ*, with some sections of the third part. Spinoza proceeds synthetically, with all the apparatus of geometrical demonstration, *more geometrico*. It is interesting in itself and as a step towards the final form which ruled the method of Spinoza. The *Cogitatio Metaphysica*, published as an appendix to the *Exposition of the Cartesian Philosophy*, is of great significance, as by means of it the growth of the system of Spinoza, towards the final form which it assumed in the *Ethics*, can in some measure be traced. We are able, also, to trace the points of divergence from Descartes, and to appreciate the originality of Spinoza.

Beginning with a description of the Cartesian doubt,

and the method arising therefrom, namely, to lay aside all prejudices, to discover the foundations on which the superstructure is to be built, to detect the causes of error, and to think all things clearly and distinctly, Spinoza proceeds to the definitions and axioms by means of which the propositions are to be demonstrated. All operations of will, intellect, imagination, and of the senses are thoughts; but only those of which we are immediately conscious, and not those which may be deduced from these operations, are thoughts. Idea is that form of thought by the immediate perception of which we are conscious of that thought. The objective reality of an idea is the entity of the thing represented by the idea, so far as it is in the idea. "Omnis res, cui inest immediate, ut in subjecto, sive per quam existit aliquid, quod percipimus, hoc est aliqua proprietas sive qualitas sive attributum, cujus realis in nobis est, vocatur substantia" (vol. ii. p. 389, Def. V.). The substance in which thought inheres is called mind, and the substance which is the immediate subject of extension and of accidents which presuppose extension is called body. The substance which we understand to be *per se* supremely perfect, in which we conceive no defect or limitation of perfection, is called God. Two substances are to be distinguished when it is possible for either to exist without the other.

We can move to the knowledge and certainty of the unknown only by the cognition and certainty of another thing which is prior to it. Based on these definitions and axioms are certain propositions, to the effect that we cannot be absolutely certain of anything as long as we are ignorant of our own existence. "I Am" must be known by itself (*per se*): That I Am, so far as

I am a being existing in a body (Quatenus res constans corpore) is not a primary truth, nor one that can be known by itself. "I am" cannot be known as a primary truth, except in so far as I think. So far Spinoza is expounding Cartesianism pure and simple, and he further tells us, without departing from the thought of his predecessor, that there are various grades of reality, for substance has more reality than accident or mode, that infinite substance has more reality than finite; and so the idea of substance has more reality than the idea of accident, and the idea of infinite substance has more reality than that of finite substance. Passing over the part referring to the objective value of ideas, and the assertion that the cause of the idea has the reality of the idea, *formaliter et eminenter*, we come to the significant part of the exposition, where he diverges from the teaching of Descartes. Proposition 5 sets forth that the existence of God is known from the mere (*sola*) consideration of His nature. Spinoza waxes eloquent over the greatness of this proposition. In a scholium he says: "From this proposition many magnificent things follow. Verily, from this alone, that existence belongs to the nature of God; or, that the conception of God involves the necessary existence of God, as the conception of a triangle that its three angles are equal to two right angles; or, that His existence not otherwise than His essence, is eternal truth; that almost all the knowledge of the attributes of God by which we are led to the love of Him (the highest blessedness) depends on this proposition. It is therefore greatly to be desired that the human race should with us at length embrace this truth."

To Spinoza the idea of God, as he expressly says, is

different from the ideas of other things, for God differs *toto genere* from other things. A proposition stating that the existence of God can be demonstrated *à posteriori* from our idea of Him leads to another proposition. The existence of God is demonstrated from the fact that we who have the idea of God exist. Here we come to the parting of the ways. Descartes had assumed the two axioms: (1) That whatsoever can effect what is greater and more difficult can effect what is easier and less; and (2) it is a greater thing to create or preserve substances than the properties or attributes of substance. Spinoza says that he does not understand the meaning of these axioms; for easier or more difficulty have a meaning only in relation to the cause, and the language has no meaning as applied to creation. And, further, to create substance is to create attributes, and to distinguish substance from attributes is possible only in abstraction, not in reality. Spinoza having stated his objections to the Cartesian axioms, sets forth the following lemmas: (1) That by which anything is more perfect in its own nature, the greater and the more necessary is the existence it involves; and, on the contrary, the more a thing involves necessary existence in its own nature, the more perfect it is. (2) That which has the power of self-conservation (*se conservandi*) has necessary existence in its own nature. We are here in the very heart of the doctrine of Spinoza. The supreme existence is furthest removed from nothingness, and from what is accidental or contingent. He further distinguishes here between necessity which is determined by causation, and that necessity which follows from the consideration of the nature or essence of a thing, neglecting altogether the

notion of its cause. What is perfection, then? "Per perfectionem, intelligo tantum realitem, sive esse; ut ex gr. in substantia plus realitatis contineri percipio, quam in modis sive accidentibus; ideoque ipsam magis necessariam et perfectionem existentiam continere clare intelligo, quam accidentia" (p. 402).

That which has the power of self-conservation has necessary existence, and has all perfections; but as man, a thinking being, has many imperfections he has not the power of self-conservation, he is conserved by another. Passing on, he seeks to prove that mind and body are to be distinguished, that God is the highest intelligence, that whatever of perfection is to be found in God is from God, there are no more Gods than one, that all things that exist are conserved by the power of God alone, that God is the Creator of all things, that things have no essence from themselves, which is the cause of the knowledge of God; but, on the contrary, God is the cause of things even as regards their essence. God is the eminently true, and never deceives. Whatever is distinctly and clearly perceived is true, and error is not something positive.

So far we have traced the exposition of the Cartesian philosophy. It is a fair and able exposition, and he departs from the teaching of Descartes as little as possible. But he does depart. Into the second part we do not enter, for it is mainly an exposition of the Cartesian physics, and gives us definitions of extension, substance, atom, the indefinite, a vacuum, space. But all these things are wrought out with deeper significance in the *Cogitatio Metaphysica*, to which we now turn.

The full title is *Metaphysical Cogitations in which the more Difficult Questions in Metaphysics, general and*

special, are briefly treated. The questions mainly are about being and its affections, God and His attributes, and the human mind. For once we are clear from the geometrical form of exposition, and we see that the geometrical form is only a form and not essential to the thought of Spinoza. He sought to live in the whole, to think the whole, and to rest only in the perfection which is the whole. This is clearly the foundation of all his thinking and striving.

It is the more difficult questions that attract him. He begins with being and its affections, as they are commonly called. Being is all that which we find, when it is clearly and distinctly understood, to exist necessarily, or at least to exist possibly. A *chimæra*, an *ens fictum*, and an *ens rationis* are not entities. An *ens fictum* has no reality; of it we can have no clear and distinct perception, for a man out of his mere will alone, and not ignorantly as in false things, but prudently and knowingly, connects what he wishes to connect, and disjoins what he wishes to disjoin. An *ens rationis* is only a mode of thinking which enables the intellect to retain, explain, and imagine things more readily. He illustrates at some length the ways of thinking by which we retain, explain, and imagine things. *Entia rationis* are not ideas of things, and they have no ideatum which necessarily or possibly exists. These modes of thinking arise from the ideas of things so immediately, that they may easily be confounded with them by those who do not most accurately attend. He lays stress on the distinction between things themselves and our modes of perceiving. And he substitutes the distinction of substance and mode for the distinction of *ens reale* and *ens rationis*.

“Hence it is easy to see how inept is the division between *ens reale et ens rationis*; for they divide *ens* into *ens* and *non-ens*, or into *ens* and a mode of thinking” (p. 462). There is a being the essence of which involves existence, and there is a being the essence of which does not involve existence.

Thus he takes the next step, which is to set forth the being of essence, the being of existence; what is the being of the idea, and of potency. What is to be understood regarding these four terms he explains in what he has to say regarding the uncreated substance, or God. All that is formally contained in created things is contained really (*eminenter*) in God. Extension we can clearly conceive without existence, but the divisibility of space is an imperfection, and imperfection cannot be ascribed to God. We are therefore constrained to confess that some attribute is present in God which contains all the perfections of matter in a more excellent way. It is apparent that Spinoza has not yet arrived at the thought of God as a *res extensa*, or at the thought that attributes of thought and extension equally belong to him. In the next place, God understands Himself and all other things; that He has all things objectively in Him. God is also the cause of all things, and that He works out of the absolute freedom of His will.

Thus the four kinds of being already mentioned may be readily understood. The being of essence is nothing else than that mode in which created things are comprehended in the attributes of God. The being of an idea is so called in so far as all things are contained objectively in the idea of God. The being of potency is so called only in respect of the

potency of God, by which all things not yet in existence could be created out of the absolute freedom of His will; and the being of existence is that essence of things beyond (*extra*) God, and considered in themselves, which is attributed to things after they have been created by God. In created things these can be distinguished; but in God is no distinction, for in Him essence, existence, potency, and intellect are all one.

Passing, in the third chapter, to the affections of being, he explains that by affections he means what Descartes meant by attributes. Of these affections he speaks of four: the necessary, the impossible, the possible, and the contingent. A thing is necessary in respect of its essence or of its cause. In respect of His essence, God necessarily exists, for His essence cannot be conceived without existence. A chimæra, in respect of the implications of its essence, cannot exist. In respect of cause, things, for example material things, are either impossible or necessary,—impossible because they cannot exist without the will of God, and necessary because God has willed that they exist. In fact, a chimæra is only a verbal being; created things depend wholly on God, and the necessity which affects them is from a cause—from being, essence, or existence; and these are not to be distinguished in God. Possibility and contingency are not affections of things; they are due to defects in our intelligence. We cannot say that things might have been contingent, because God could have decreed otherwise; for in eternity there is no when, before, or after, nor any affection of time; it follows that God never existed before these decrees in order that He might have decreed something else.

The next question that attracts his attention is that

of the freedom of human will in relation to the decrees of God. It is noteworthy, because Spinoza has not yet reached the ground which he accepts in the *Ethics*. He calls the will free, and yet he says that no man wishes to do, or does, anything except what God from all eternity has decreed what that man wills or does. He leaves the antinomy in its naked simplicity, as so many have done in the same situation. How the two can be reconciled he cannot say. "Quomodo autem id fieri possit, servata humana libertate, captum nostrum excedit" (p. 471). "For we clearly and distinctly understand that we are free in our actions, and can deliberate about many things merely because we chose to do so; if we attend also to the nature of God, as we have already shown, we clearly and distinctly understand that all things depend on Him, and that nothing exists unless it was decreed from all eternity that it should exist. But how the human will should be generated (procreatur) each moment in such a way as to remain free, of this we are ignorant" (p. 471).

We shall see afterwards how Spinoza overcame the difficulty, mainly by the suppression of one side of it. Meanwhile let us follow his meditations. Duration and time form the subject of the next chapter. Out of the distinction between being whose essence involves existence, and being whose essence involves only possible existence, arises the distinction between eternity and time. Deferring a fuller treatment of eternity, he deals with it here only so far as to say that it is the attribute under which we conceive the infinite existence of God, as duration is the attribute under which we conceive the existence of created things, so far as they

persevere in their actuality. Duration cannot be distinguished from the existence of anything save in thought. By as much as you withdraw Duration from anything, by so much you withdraw existence from it. To determine Duration we compare it with the duration of those things which have a determined motion, which we call Time. Thus Time is not an affection of things; it is only a mere mode of thinking, a mode which serves for the explanation of duration. Duration is of existence, not of essence. Spinoza returns to the discussion of eternity in the next book; here he proceeds to treat briefly of Opposition, Order, Agreement, Diversity, Subject, Adjunct; and next takes up the One, the True, and the Good. He asks, What is unity and what is multitude, and in what respect God may be said to be one and in what respect He may be said to be unique (*unicus*)? Unity is not something to be distinguished from the thing itself; it adds nothing to the thing: it is a mode of thought by which we distinguish the thing from other things which are like it, or in some way agree with it. Multitude is also a mode of thought. We say that God is one, in so far as we separate Him from other beings; in so far as we conceive that there can be no more Gods than one, He is called the Only. Properly, however, He can be called neither One nor Unique. He finally dismisses the question as a mere matter of words.

True and false are predicates of what has happened; and we say of a narrative, which describes accurately what has happened, that it is true. We use the word also to describe the correspondence of an idea with the reality. A true idea describes the thing accurately, a false idea inaccurately. These are not predicates of

things; as such they are improperly used, or rhetorically only.

Good and evil are relative terms; they describe the relation of one thing to another which conduces to the acquiring of that which it loves, or the contrary. Anything may be good or bad in respect of different persons. This also is a distinction drawn by reason which is not a distinction of things. He illustrates from the distinction between Motion and Force. Force is nothing else, he says, than the motion itself. The reason why we distinguish the *conatus* from the thing itself is because men find in themselves a desire of self-conservation, and they imagine such a desire exists in everything else. Thus there is no metaphysical truth, unity, or good; these are *entia rationis*. There are many attributes which men ascribe to God—such as Creator, Judge, Merciful—which could be potentially true before the creation of things. Much might be said on this conclusion, which proceeds on the assumption that the ethical attributes of God have a reference only to His relation to the world. A deeper view of God finds room for ethical relations within the Godhead. But such a discussion would lead us too far afield.

The second part of the *Cogitatio* deals with the attributes of God and with the human mind. The attributes dealt with are Eternity, Unity, Immen-sity, Immutability, Simplicity, Life, Intellect, Will, and Potency; there are articles also on the Creation, on the Concursus of God, and on the Human Mind. He begins by reminding us that there is *in rerum natura* nothing but substance and modes, and that therefore he will not be expected to speak of substantial forms, of reals, or of accidents. Substance is

found in two principal kinds, Extension and Thought; and Thought appears as created, namely, the human mind, and uncreated, or God. Repeating again the definition of Substance, he proceeds to discuss the eternity of God. We cannot attribute duration to God; it is only an attribute of the existence, not of the essence of things. Eternity belongs to God alone. Duration is separable into parts, may be greater or less, and therefore we cannot attribute duration to God. Not only in the discussion of the attribute of eternity, but in the discussion of other attributes as well, Spinoza is jealous of any attribution to God of any attribute which might involve any imperfection, becoming, or defect. Unity must be construed so that it will involve no limitation. Immensity necessarily involves the idea of quantity and limitation, and cannot be applied to God; while he believes in the ubiquity of God, yet he cannot explain it. Many authors, he tells us, have erred in various ways, for they speak of God in language which implies imperfection. The eternity of God is God Himself; the existence of God is God Himself; and so on, for to separate the essence of God from God Himself is inconceivable. Then he speaks of the immutability of God in terms which excite approval and delight. From all change, all mutation, He is free. The discussion is full of interest, leading to a description of what change is, and what transformation is. In God transformation has no place; mutability comes from the operation of external causes; but God cannot be changed by another, nor even by Himself.

Dealing with the simplicity of God, he recalls to mind the threefold distinction of Descartes, namely, that things are real, modal, or of reason. Having anew

described these, he shows how composition arises, and comes back to say that God is the most simple Being, and that His attributes are only distinctions of reason. Rather, the distinctions between His attributes are only distinctions of reason. It would appear that Spinoza holds that God is whole in every attribute, and that every attribute is God Himself from the point of view of that attribute.

Is life to be predicated of God? It depends on what we understand life to be. If, with the schoolmen, we divide spirits into three kinds—vegetative, sensitive, and intellectual—and attribute these to plants, brutes, and men respectively, it follows that all else is destitute of life. Spinoza makes short work of the scholastic idea of life. He briefly states that in matter there is nothing save mechanical structures (*texturas*) and operations. It is to be noted, however, that if life is to be attributed to corporeal things, there is nothing without life; if life be attributed only to souls united to bodies, it can be attributed to man alone, and perhaps also to animals; not, indeed, to minds or to God. If the meaning of life is to be more widely extended, it is to be attributed even to corporeal things, to minds not united with bodies, and to minds separated from the body. Life, according to Spinoza, is the power by which a thing perseveres in its own being, and, inasmuch as that power is different from the things themselves, they may rightly be said to have it. But as the power by which God continues in His own being is nothing else than His essence, therefore they are right who call God life. It is to be observed that in his definition of life Spinoza has lost sight of any specific characteristic of life, and identifies

it with the power by which all things continue in their being. The definition is so far true, but it is as true of things without life as of things with life.

Next, he deals with the intellect of God, and claims for Him omniscience, and claims this on the ground that knowledge is a perfection, and God as the all-perfect Being must possess complete knowledge. He lays down emphatically the proposition that the object of the knowledge of God is not something beyond God, but God Himself. From the perfection of God it follows that His ideas are not terminated as ours are by objects placed beyond God. It is an error to say that there is a matter, eternal and external, to God on which He works; and it is equally an error to say that to God there are things impossible, necessary, or contingent, for that would be to suppose that He is ignorant whether they exist or not. It is an error, also, to suppose that He knows things from circumstances, as men do through a long experience. God is the object of His own knowledge; those who say that the world is the object of the knowledge of God are less wise than those who say that the building raised by some illustrious architect is the object of his knowledge. We are here reminded of the self-thinking thought of Aristotle, and of the modern contention that the object of the revelation of God is God Himself.

In what way does God know sins, beings of reason, and other similar things? The answer is, that God necessarily understands those things of which He is the cause, because they could not be without the divine concursus. "*Cum ergo mala et peccat in rebus nihil est, sed tantum in mente humana, res inter se comparante; sequitur, Deum ipsa extra mentes humanas*

non cognoscere," (p. 489). *Entia rationis* are modes of thinking and are understood by God, in so far as He preserves and continually creates the human minds of whose thinking these are the modes. Those people seem to err with delight, and to think absurdly who are of opinion that God knows only eternal things which are by nature unbegotten and incorruptible, and nothing of the world save species which are unbegotten and incorruptible. What can be more absurd than to suppose that those particular things which cannot exist for a moment without the concursus of God are shut out from His knowledge? There is only one simple purpose of God. Created things are various and multiform, but the idea of God, by which we describe His omniscience, is one and most simple. "Denique si ad analogiam totius Naturæ attendimus, ipsam ut unum Ens considerare possumus, et per consequens una tantum erit Dei idea sive decretum de Natura naturata" (p. 490).

On the will of God he begins with a disclaimer of knowledge. For he says that he places among the desiderata, how to distinguish between the essence of God, His intellect by which He knows Himself, and His will by which He wills to love Himself. Spinoza is not unmindful of the notion of personality which theologians are wont to use to explain this difficulty. But although he does not ignore the word, he finds it impossible to form a clear and distinct idea of it, "although we firmly believe that in the most blessed vision of God, which is promised to the faithful, God will reveal this to His own. Will and power *quoad extra* are not distinguished from the intellect of God, for God hath not only decreed that things should

exist, but that they should exist so that their essence and existence should depend on His will and power. From which we perceive clearly and distinctly that the intellect, power, and will of God, by which He has created, understood, and preserved, or loved created things, are in no way to be distinguished among themselves, but only in respect of our thought" (p. 491). Having illustrated the statement that God has some things in hatred, from a quotation from St. Paul's Epistle to the Romans, he asks: "Why, then, does God admonish men? God from all eternity decreed to admonish men at that certain time, that they whom He willed to be saved might be converted" (p. 491). The view is so strange as coming from Spinoza that we quote the following: "Could not God have saved them without that admonition? He could. Why, then, did He not save them? To this I will reply after you have told me why God did not cause the Red Sea to flow backwards without a vehement east wind, and why He does not accomplish all particular motions without others, and why God does infinite things by means of intermediate causes? Why are the wicked punished, for they act according to their nature, and according to the divine decree? But I reply, it is of the divine decree that they are punished, and if only those whom we feign to sin out of their own freedom are to be punished, why do men attempt to exterminate venomous serpents?" (p. 491). He concludes this chapter with a statement that the sacred page teaches nothing repugnant to the light of nature.

How the omnipotence of God is to be understood is his next inquiry. He first sets aside what he

considers to be errors, and affirms that all things absolutely depend on God. He divides the power of God into ordinate and absolute: ordinate power when we have regard to His decrees, and absolute power when we do not attend to His decrees. He also makes a distinction between ordinary and extraordinary power; ordinary power being that by which the world is preserved in a certain order, extraordinary power when he does anything *præter ordinem naturæ*—for example, all miracles, such as the speaking of an ass, apparition of angels, and so on. He next deals with creation, which he thus describes. Creation is that operation in which no causes co-operate beyond (*præter*) the sufficient cause, or a created thing is that which presupposes for its existence nothing beyond God. The vulgar definition of creation he professes to reject, and he explicates in some detail the particulars of his own definition. Accidents and modes are not created; there was neither time nor duration before creation. Creation and Preservation are the same divine operation. He proceeds to inquire into the nature of created and uncreated being, and to ask if what is created could have been created from eternity. He points out how divine differ from human thoughts, that there is nothing *extra Deum*, and that although God is eternal it does not follow that His works are eternal. A little impatience is manifested with those whom he imagines to be his opponents, and he finally says that it all turns on the distinction between eternity and duration; that duration is unintelligible apart from created things, and eternity is unintelligible without God. A chapter “*De concursu Dei*” completes this part of

the book, and then he proceeds to deal with the human mind. As he concludes this part he turns once more to the theologians, and in answer to them uses a metaphor which appears in the *Ethics* also. He speaks of the theological division of the attributes of God into communicable and incommunicable, and says that it is a distinction more of words than of things. For the knowledge of God no more agrees with the knowledge of man than the dog-star with the dog that barks.

Speaking of human mind, well, it will be better to postpone this until we come to deal with the corresponding portion of the *Ethics*. There is nothing in it which is not in the *Ethics*, nor do we find here anything inconsistent with the fuller teaching contained in the later work. It is different with the other parts of the *Cogitatio Metaphysica*. There the problems presented to the mind of Spinoza have not assumed the form which they have in the *Ethics*. While the determination to proceed from the reality of being, to assume the reality and positive character of the absolute and infinite, and the derivative and imperfect character of the finite is present in both works, in the earlier work the freedom of man is still a problem, the relation of God to the world is thought of under the thought of a decree, and he hesitates to make the world the "other" of God. The absoluteness of God becomes more absolute, and the initial tendency of his system works itself out even to acosmism. The *Cogitatio* reminds us of the thinking of Jonathan Edwards, the great American thinker, between whom and Spinoza there are many resemblances, particularly the love of "Being" in general, but on this we do not

dwell. What we do see in Spinoza, as his thought proceeds from its expression in the *Cogitatio* to the form of the *Ethics*, is that he moves away from many aspects of the problem present in the former work, to their entire suppression in the latter. Freedom has disappeared, the relative independence of the world—relatively independent at least so far as to be the subject of a decree—has vanished, and the *Natura naturans* has its necessary outcome in the *Natura naturata*. He will not continue to speak of the absolute freedom of the Divine Will. He has warned us, in the earlier work, that this is only a mode of thought, or, perhaps less, a mode of speech. But in the later work, at least in the earlier part of it, the personal character of God and His distinction from the world, which clung to Spinoza, has vanished, and the wholeness of the whole alone remains. Yet only in the earlier part of the *Ethics* is the tendency from the personal God to the *Το ὄν* of Aryan speculation so far complete; in the later part, Substance takes back to itself the characteristics of the Jehovah of the Hebrews, and Spinoza is still the Hebrew, who still feels the weight of the burden handed down to him from of old.

CHAPTER X

The *Ethics*—The First Two Books—Substance—God—Proofs of the Existence of God—Their Validity—Exclusion of ethical Conceptions from Reality—The Indeterminate—Determination—Power and Activity—Modes—Unity and Difference—Freedom and Self-determination—Degrees of Reality—*Natura naturans* and *Natura naturata*—Freedom—Teleology—Substance, Attribute, Mode—Dr. Ward on Teleology.

THE final form of the teaching of Spinoza is found in the *Ethics*. It is in geometrical form, with all the machinery of definitions, axioms, lemmas, postulates, and corollaries, with which geometricians have made us familiar. It adds to the difficulty of understanding his theory of Reality, for a theory of Reality it is. In order to appreciate the *Ethics* we must keep in mind the other works of Spinoza, especially the *Correspondence*. In truth, there is no part of his works which can be neglected in the attempt to appreciate his philosophy. We have not space to follow in detail the definitions, axioms, and so on; we must be content with a briefer mode of treatment.

God or Substance is one—absolutely infinite, indivisible, self-determined, eternal, conceived through itself alone; and because it is so it possesses attributes infinite in number, and each infinite in its kind, eternal, and indivisible. While Substance must be

regarded as possessed of infinite attributes, yet as apprehended by the finite intelligence of man it is regarded as possessed of two only, that is to say, only two of these attributes can be apprehended by man. These are Thought and Extension. Substance, then, as apprehended by man is apprehended under Thought and Extension, and the modes of Substance are those finite presentations of it which are perceived by the senses and imagination as individual things or ideas. The modes are always finite, divisible, transitory, and dependent. Everything is included in the scheme of Substance, Attribute, Mode.

For Spinoza, Substance and God are practically terms of the same extent of meaning. His main aim in his definitions is to get rid of anthropomorphism. The God whose name occurs so often in his writings is not thought of by him in the terms used by theologians or other philosophers. He is not thought of as Creator, as Ruler, Judge, nor does he think of God as Christian theologians do. Spinoza regards the use of the terms of intellect, will, moral qualities, even personality, as altogether inapplicable to God, and he definitely and resolutely excludes them from the nature of God. Substance is that which is in itself, and is conceived through itself. God is defined as a "Being absolutely infinite, that is, Substance consisting of infinite attributes, of which each one expresses eternal and infinite essence." Attribute is what the intellect perceives as constituting the essence of Substance. We find in the Propositions that existence belongs to the nature of Substance, and Proposition 8 with its corollaries shows it to be infinite and one, which identifies it with God. In Proposition 11

the identification is complete. God or Substance, consisting of infinite attributes of which each expresses eternal and infinite essence, necessarily exists; and Proposition 20 identifies existence and essence in God. "The existence of God and His essence are one and the same."

Taking these statements, and not asking at present how they agree with or differ from the conception of God as current among men, we ask what was the meaning of Spinoza, looking only at the question as a theory of Reality. It seems evident that Spinoza meant by God, Substance, *Causa sui*; and by all the terms he uses, the description of Reality as a whole, Universal Existence, or Being itself. Existence is, and is a system; it is real as the unity of thought and being, and as the final interpretation of both subjective and objective experience. In Being, as such, there is no limitation, no imperfection; limitation and determination *ab extra* is the characteristic of finite being, for finiteness is precisely that which limits finite existence. So Spinoza in many places consistently declares. All determination is negation, so there is in the infinite Substance only self-determination.

The proofs of the necessary existence of God are full of interest, and of these there are four alternate forms, each of which has its interest. They are proofs, only from Spinoza's point of view. Take his definition of God, or Substance, as existence without limit or qualification, and he says, grant that anything is actual and you must grant that God is actual; or, admit that anything exists necessarily, then the being which is self-dependent exists necessarily. "We must exist either in ourselves or in something else that necessarily exists,

therefore a Being absolutely infinite necessarily exists." The proofs are valid if we grant Spinoza's conception of God. We do not need to prove existence, what we need is to define its character. It is to be noted that perfection is used by Spinoza in his own sense; it means only completeness of existence, and is not to be understood as if it implied moral or mental qualities. For these—such as wisdom, justice, goodness—are not suitable conceptions for the characterisation of being in its absolute and eternal infinity. Spinoza really takes his stand on the fact of existence, and affirms that if there be existence at all it must be somehow complete. Incomplete existence, taken by itself, is self-contradictory.

But of what kind is this Being? Is it the empty abstraction of Being in general? Is it mere substance without a predicate? Is it that vaguest and most barren of all abstractions which Hegel characterises as equivalent to its opposite—nothingness?

On any view, Being must be, and it must be real and concrete. It must have not merely the blank form of existence; it must contain within itself all determinations, all relations, in the unity of one system. This is the criterion of a system of philosophy which is to be an adequate and final interpretation of experience. How does the philosophy of Spinoza stand the test? He professes to avoid abstract terms, and is consistent in looking at abstractions as due to the limitations of human intelligence. He asserts that the more general and abstract a term is, the further it is removed from reality. The question arises, has he succeeded in getting rid of abstractions, or is he still in bondage to them, his defiance of them notwithstanding?

He is persuaded that he is dealing with a real, concrete universe. He seeks to start from fact, not from an idea. Being as the essence, truth, and fulness of all that is, is his datum, and his apparent deduction is simply the explication of his initial assumption. Taking Being as a whole, in its perfection and completeness as a system, and this is his postulate: he is right in affirming of it that it is without limit, number, or change. But there is a system of existing things which is determinate, divisible, subject to change, and finite. How is the one system to be deduced from the other? How can the concreteness of the whole and its wholeness consist with the changeableness of the *Natura naturata*? It is the old problem of permanence and change, or rather the older problem of the one and the many, of unity and difference.

There is another problem which presses with great weight on the system of Spinoza. He affirms of God that He is absolutely indeterminate. In Letter 41 he says: "Determination is nothing positive, but only a limitation of the existence of the nature conceived as determinate." The question arises, how do determinations arise? Spinoza endeavours to answer by his doctrine of Attributes and Modes. "By Attribute I mean the same thing, except that it is called Attribute with respect to the understanding, which attributes to Substance the particular nature aforesaid." This is from Letter 27, in which he had written: "By Substance I mean that which is in itself and is conceived through itself, that is, of which the conception does not involve the conception of anything else." The definition of the *Ethics* is: "That which the intellect perceives with regard to Substance as constituting its

essence." The construction most favourable for the system of Spinoza is that which interprets the attributes as infinite expressions of the all-inclusive infinite Substance. Yet the difficulty meets us, that these expressions are relative to our apprehension; for they are what the intellect apprehends with regard to Substance as constituting its essence. Even if the attributes are the essence of Substance as apprehended, we can scarcely avoid the conclusion that the essence apprehended is relative to the intellect that apprehends, and is without significance to the substance itself. It is not enough to say that the attribute is God's attribute, though it is God's nature as viewed by man. The polemic of Spinoza against the attribution of moral attributes to God is quite as effective against his own view of the attributes.

The attributes which express the essence of God are related to the modes, and each mode expresses in a determinate manner some attribute of God. The modes are only the manner in which the infinite essence gives expression to itself. We are met here with the difficulty that the modes are regarded negatively as limited, and as such are marked off from the infinite Substance. In so far as a mode expresses the ultimate Substance it is positive. How are we to explain these positive and negative aspects?

Returning to the consideration of the indeterminate, which is for him the main characteristic of the infinite Substance, we ask, how does he reconcile this indeterminate with the conception that in it all determinate being has its ground or cause? From indeterminates as such no inference can be drawn. Purely indeterminate and abstract being, characterised by no positive

mark,—for any such mark would make it determinate,—how can such being enter on a course of evolution? How is one to pass from pure indeterminateness to the determinations that are requisite in order that substance should be real? This is, however, not the only view of Substance which is to be found in Spinoza. Frequently he speaks of Substance as the *ens realissimum*, the sum, or the system of all possible reality, in which are infinite attributes, each of which expresses eternal and infinite essence, and which contains all possible perfection. He has both conceptions, and he wavers between them. But if he insists on the perfect fulness of reality, and uses it as the ground of determinate existence, he must let the indeterminates go, and must look at Substance as determinate being, only that the ground of its determinateness is in itself and not in another. This is, in fact, what he does when he says that Substance is *Causa sui*. The truth is, that in this crucial place, that is, in the way of connection of the ultimate ground of things with the infinite diversity of finite modes, there is no possible way of transition. For the determination of particular things into their particularity being negative, this negative element has to be explained, and from the notion of Substance, whether it is considered as the indeterminate or as the *ens realissimum*, no explanation is forthcoming.

May an explanation be found in the thought that God's power is identical with His essence, and that He is activity itself? In the Scholium to *Ethics*, Part II. Proposition 3, he says: "We have shown that God acts by the same necessity as that by which He understands Himself; in other words, as it follows from the necessity of the divine nature (as all admit) that God under-

stands Himself, so by the same necessity it follows that God performs infinite acts in infinite ways. We further showed that God's power is God's essence in action, therefore it is as impossible for us to conceive God as not acting as to conceive Him as non-existent." Being is and acts, and the infinite things which come from His infinite nature He necessarily does. Is there here a way of connecting substance with its modes, and a way of reconciling the negative determination of particular existence with the causality of God? We are told in successive propositions, *e.g.*, (14) Besides God no substance can be granted or conceived; (15) whatever is, is in God, and without God nothing can be, or be conceived; (16) from the necessity of the divine nature must follow an infinite number of things in infinite ways, that is, all things which fall within the sphere of the infinite intellect; (17) God acts solely by the laws of His own nature, and is not constrained by any one; and (18) God is the immanent and not the transient cause of all things. We ask, in passing, how all these agree with the notion of the indeterminateness of Substance? Surely these conceptions are determinate enough, and when we put them together we reach the conception that God is determinate Being, though the reason of His determinateness is from Himself. Again, it is scarcely consistent with the proposition "*Omnis determinatio est negatio*" to affirm (Prop. 9): "*Quo plus realitatis aut esse unaquaque res habet, eo plura attributa ipsi competunt.*" From the statement that determination is negative we should expect the conclusion, that the more the determinations the greater would the negations be; and as every attribute of finite things is a determination, the more the

attributes are, the less would the reality be. We shall have to invert the axiom and say, "Omnis determinatio est affirmatio," which would be as true as the other.

How to make the transition from the unity of the substance to the manifoldness of the real world is the pressing question. Is it to be accomplished by the thought that God is *Actus purus*? As to the causality of God, Spinoza says with emphasis, that God is the cause of all things and of Himself, the cause not only of their becoming but also of their persistence. He is a unique cause, for, in the ordinary meaning of cause, it is only a link in the chain of things; but God is not determined to be or to act by anything *ab extra*. As there is nothing within or without God to prompt Him to act, He is the (free) cause of all things; "for God exists by the sole necessity of His nature, and acts by the sole necessity of His nature, wherefore God is the sole free cause" (Prop. 17, Cor. 2). Note the identification of freedom with the self-determined or completely necessary. There is no fate, no external order, no ideal even, which could be a motive or cause of the divine action. God's nature is in every way complete. "From the supreme power of God, that is, from His infinite nature, an infinite number of things have necessarily flowed forth in an infinite number of ways. All things flow forth with the same necessity from the divine nature, as from the nature of a triangle it follows, from eternity, that its three interior angles are equal to two right angles. The omnipotence of God has been actual from eternity, and to eternity will persist in the same actuality" (*Ethics*, I. 17, Sch.). That necessity or self-determination which makes the causality of God free makes freedom, contingency, or

possibility out of the question; the existent order of nature in all its parts could not have been otherwise than it is. Possibility or contingency arises, as a conception, only from our imperfect knowledge.

Deferring for the moment the polemic against the freedom of the will and final causes, we ask, have we, through the account of the causality, found any way of reconciling the unity of things with their existence in a determinate system? We have in truth passed from the conception of causality altogether, and are in the sphere of logical reason and consequent. The connection of triangularity with the property of a triangle instanced cannot be regarded as identical with the relation of cause and effect. The knot is cut, not untied, and the system of things is looked at from two points of view—that of cause and that of effect; and as the notions of time and change are eliminated there is no mediation between the two. For the notion of cause is in relation to change, and the meaning of the word is strained when it is looked at *sub specie æternitatis*. Thus the outcome of the system of Spinoza is to substitute for the variety of a manifold world, with a movement of growth in space and time, the supposition of a system of relations, in which there is no before or after, in which any part has its place and function in virtue of the eternal causality of God. It is curious to note how differently the notions of space and time are dealt with by him. Space becomes one of the attributes of God, indeed one of the two by which men can know Him. God is a *res extensa*. On the other hand, time, in his hands, becomes purely subjective, a form which owes its speciousness to the defect of the finite mind. Mathematicians tell us that time

is the only independent variable, that it is of one dimension, and metaphysicians tell us that it is the form of the inner sense. But both the mathematicians and the metaphysicians tell us that we cannot think independently of time, any more than motion out of place is possible. Eliminate time, say that it is merely a defect of finite intelligence, and the universe becomes for us, as for Spinoza, something in which there is no when, before, or after; and if it is to be an intelligible system, it must be regarded as a system of permanent relations, each of which is as valuable as any other.

No doubt Spinoza assures us that the more directly a thing owes its being and persistence to the causality of God, the more of perfection it has. What owes its being directly to His attributes has more perfection than that which owes itself to the modes. In this way some kind of gradation finds a place in his system, but the gradation is more apparent than real. Is there a unity in difference in his system? One would like to think so. But the indeterminateness of substance stands between us and that conclusion. Still, he aimed at the construction of a system that would manifest unity in difference, or that unity which expresses itself in difference. At first sight the scheme of Substance, Attribute, Mode, seems to show that Substance, Attribute, Mode are the ways in which being must of necessity express itself. But that would lead to the conclusion that determination is a characteristic of God, and we are warned off from that conclusion by the express teaching about His indeterminateness. He tells us, again, that "particular things are nothing but affections of God's attributes, or modes by which God's attributes are expressed in a determinate and definite

way" (Part I. Prop. 25, Cor.). This would seem to secure for particular things some kind of individuality, but it does not show how particular things have their place in a system of reality. In other words, Spinoza scarcely seems to think of a whole, in which each thing has its special part and function; he is so careful to avoid anthropomorphism that he neglects many of the most fruitful categories of explanation. Particular things are in time, and time is a mere help to the imagination, and the apprehension of particular things is so far an illusion.

In Proposition 29, Scholium, he says: "I wish to explain what is to be understood by *Natura naturans* and *Natura naturata*, or rather to point it out. From what has been said before, it is sufficiently clear that by *Natura naturans* is to be understood by us that which is in itself, and is conceived through itself, or such attributes of substance as express infinite and eternal essence,—that is, God, in so far as He is considered as a free cause. By *Natura naturata* I understand all that which follows out of (*ex*) the necessity of the nature of God, or of any one of the attributes of God—that is, all the modes of the attributes of God, in so far as they are considered as things in God, and which cannot be, or be conceived, without God." Proposition 21: God as cause and God as effect, or rather God as ground and God as consequent, is the substance of the paragraph. But neither relationship expresses his meaning exactly. If we take the relation as that of cause and effect, we are landed in the supposition of priority of the one to the other, and that involves the idea of time. If the relation of ground and consequence rules, then we are constrained to think of the ground as in-

complete without the consequence. The difficulty in either case is that we have to think of relations and differences within the one, and we have no way of thinking them. For cause and effect, ground and consequence are relations, and relations are not at home in the indeterminate.

As we follow the evolution of his thought along one side of it, we find that Spinoza holds that God is absolutely one in all the states of His being. Everything that is and works, manifests God. In His *essentia* or *potentia* all realities are comprehended, and His power is actual in all the grades of reality. As we pass to the consideration of *Natura naturata*, and to finite being, we are confronted with limitations and negations which are unexplained. Are these limitations or defects only illusions, *entia rationis* which have no bearing on God, but only a bearing on finite things? Then in the *Natura naturata* we have only an appearance, and specially the world of things in time and space is an illusion. God, let us remember, is wholly one, and in that oneness He must contain all the characteristic marks which complete knowledge could find in the real. All perfections are in Him, and He is the actualisation of all possible existence. Reality extends far beyond those attributes of Thought and Extension by which God is apprehended in the human intellect. How are the attributes related to the one substance? and how are they related to each other? There is no answer to this question. The attributes are separate and distinct from each other, they are related only to the substance, and yet there is no possibility of thinking them as varieties of the one substance. From the unbroken unity of the substance to the side-by-side-

ness of the attributes there is no transition. Even in relation to the infiniteness of the attributes the principle of determinateness or negation must enter in, for they are distinct from each other. It is not possible to hold together the conception of God as exclusive of all determination, and as comprehending an infinite diversity of ultimate attributes, each of which is different from the others. As a scheme for the uniting of the one and the many, it becomes more incoherent the more it is examined.

Passing to his polemic against freedom and final causes, we have to remark that in this connection we shall find that Spinoza makes abundant use of the principle of illusion as a source of explanation or a means of explaining away what is inconsistent with the principles of his philosophy. In the long run the appeal must be to the experience of man, for in the end a system of philosophy must be the interpretation of experience. It need not be empirical, but it must interpret experience and be consistent with experience. In truth, every philosophy admits the claim, and all philosophies admit that they must satisfy it. If any experience is held to be illusive the illusiveness must be explained, not simply declared dogmatically to be illusive. What, then, is the basis of Spinoza's polemic against freedom? In Letter 62 he says: "I say that a thing is free which exists and acts solely by the necessity of its own nature. Thus God also understands Himself and all things freely, because it follows solely from the necessity of His nature that He should understand all things. You see, I do not place freedom in free decision, but in free necessity. However, let us descend to created things, which are all determined by external

things to exist and operate in a given determinate manner. In order that this may be clearly understood, let us conceive a very simple thing. For instance, a stone receives from the impulsion of an external cause a certain quantity of motion, by virtue of which it continues to move after the impulsion given by the external cause has ceased. The permanence of the stone's motion is constrained, not necessary, because it must be defined by the impulsion of an external cause. What is true of the stone is true of any individual, however complicated its nature or varied its functions, inasmuch as every individual thing is necessarily determined by some external cause to exist and operate in a fixed and determinate manner" (Elwes' Trans., vol. ii. p. 390). "Men think themselves free, inasmuch as they are conscious of their volitions and desires, and never even dream in their ignorance of the causes which have disposed them so to wish and desire." Imagine a stone to be conscious and know that it endeavours to persist in its motion. This stone, since it is conscious only of its own endeavour and deeply interested in it, will believe that it is perfectly free, and continues in motion for no other reason than that it so wills. This is the illustration of the illusion of will and freedom given by him in a subsequent part of the letter quoted above. We ask, is it an adequate interpretation of human experience in its consciousness of freedom? The answer must be, No. For even though action and reaction are always equal and opposite, yet the reaction from a kick to a stone is one thing, and the reaction from a kick to a dog is another thing. The last may be rather inconvenient to the kicker. From Spinoza's practice we gather that

he was in the way of thinking twice, and exercised the freedom of striving to bring his thoughts into consistency with truth. Was he, then, ignorant of the causes which disposed him to think again and again? It may be true, it likely is, that freedom is self-determination, but it is implied that the self can determine itself to something. Man can form an ideal for himself, and if he can, all the contentions of Spinoza are irrelevant. Abstract from the inner life, and look at man as a link in the chain of things, and you may describe him in Spinoza's terms; take into consideration all the elements of the problem, and take account of the self-conscious life of man, and freedom must be regarded as real. We can look before and after, and pine for what is not. We can dream dreams, and see visions, and give to airy nothing a local habitation and a name. There are such things as books, houses, cities, ships, railways,—all the multiform and multitudinous works of man,—all of which prove that human volitions and human activities count for something in the scheme of things.

We appeal to the example of Spinoza against the mere determinism of Spinoza. He is himself an example of the truth that human volition and human activity is a *vera causa*. For his system is his own, and is as much poetry as philosophy. It is a great illustration of the reality of human freedom, and of the worth of human activity. He had a high ideal of conduct,—was that the work in him of an external cause? He shaped his conduct after that ideal—why? He held the doctrine of the activity of human intelligence, and in his hands that activity produced something,—did his intelligence simply move as it was moved?

Our contention is, that Spinoza ignored altogether, or explained away, some of the most essential features of our experience. As he denied freedom, so he also denied final cause. Bacon had called final causes vestal virgins which could produce no fruit. Descartes had in pretended humility ignored them; it was reserved for Spinoza to treat them as illusions, mere subjectivities whose very existence depended on the ignorance and finiteness of man. He is aware of the fact "that men do all things for an end, namely, for that which is useful to them, and which they seek. Thus it comes to pass that they only look for a knowledge of the final causes of events, and when these are learned they are content, as having no cause for further doubt. If they cannot learn such causes from external sources they are compelled to turn to considering themselves, and reflecting what end would have induced them personally to bring about the given event, and thus they judge necessarily other natures by their own. Further, as they find in themselves and outside themselves many means which assist them not a little in their search for what is useful,—for instance, eyes for seeing, teeth for chewing, herbs and animals for yielding food, the sun for giving light, the sea for breeding fish, etc.,—they come to look on the whole of nature as a means for obtaining such conveniences" (Book I., Appendix). So prone is man to such a mode of thought that the truth might have been concealed from him to all eternity "if mathematics had not furnished a standard of verity, in considering solely the essence and properties of figures without regard to final causes." There is no doubt in the mind of

Spinoza about cause; he regards it as true, effective, and necessary. Causality as power is at the basis of his system, and is the nerve of his argument. Yet the days to come have revealed the possibility of making the idea of cause as subjective as Spinoza made the idea of final cause. All students of philosophy know Hume, and he made the source of the idea of cause to be custom. And any argument that answers Hume regarding cause will answer Spinoza regarding final cause.

At all events, some explanation of man's belief in final cause is needed, and if it be an illusion the rise of the illusion should be accounted for. It is a matter of fact; nature is amenable to our ends, and we can make ourselves at home in this world. The teleological aspect of things has been made vivid to us all by the great work of Darwin and his followers, who have made evolution almost a form of modern thought. A purpose and a meaning is sought for with regard to every animal, and to every part of every animal, down to the colour of animals and birds. Life is teleological through and through. The normal activity of man is activity for an end. Activity prompted by intelligent purpose, and conscious volition aiming at a foreseen and designed result, is the character of human intelligence. From this point of view every activity of man is teleological, whether he is building railways, cathedrals, or thinking out the principles of their construction. Teleological also is the activity of Newton when he thinks out the *Principia*, and of Spinoza in writing his *Ethics*. In fact, Spinoza himself tells us so. But his action was teleological in a deeper sense, for the desire to know,

even where practice does not follow, is for an end.

Spinoza also helps us against himself when he has laid so strong a stress on the principle of self-conservation. It is a most important and far-reaching principle, and naturalists tell us that a living machine is one that does not depend on external impulses for its movements. That is the principle of the self-conservation of animals, and it is teleological. See the able discussion in Dr. Ward's Gifford Lecture: "We have seen," says Dr. Ward, "that the process of natural knowledge is teleological in its origin, since it was prompted and sustained by practical motives. Also, that the conception of natural law is teleological in its character,—first, inasmuch as it is hypothetical, and every hypothesis is means to an end, a theoretical organon that may or may not work; secondly, and more specially, inasmuch as the hypothesis is that Nature will conform to the conditions of our intelligence. . . . It being in general granted that our conception of the unity and regularity of Nature is entitled to the name of knowledge—being ever confirmed, never falsified, by experience—we are now equally entitled to say that this unity and regularity of nature proves that nature itself is teleological, and that in two respects:—(1) It is conformable to human intelligence, and (2) in consequence it is amenable to human ends" (Dr. Ward's *Naturalism and Agnosticism*, vol. ii. pp. 253, 254).

CHAPTER XI

Application of the Principles of the System to the Life of Man—

Reply to the Charge of Atheism—Definitions—*Res cogitans et res extensa*—The adequate Idea—Kant on the Question how Things are given us—A Science of Nature—Properties of Matter—Parallelism—Association of Ideas—Knowledge—The three Kinds of Knowledge—*Sub specie æternitatis*—Will and Understanding—Will and Desire.

IN the Preface to the second part of the *Ethics* Spinoza explains the plan and purpose of the rest of the book. "I now pass on to explaining the results which must necessarily follow from the essence of God, or of the eternal and infinite Being; not indeed all of them, but only those which are able to lead us, as it were by the hand, to the knowledge of the human mind and its highest blessedness" (Elwes, vol. ii. p. 82). From a scheme of the inevitable necessity of things he has to explain the nature of man and man's place in Nature, and to develop a system of ethics and politics which will do some justice to the facts of human life and character. He is quite conscious of the nature of his task, and he does not shrink from it. In Letter 49 he says, in answer to the charge that he had thrown off all religion: "I would ask whether a man throws off all religion who maintains that God must

be acknowledged as the highest good, and must, as such, be loved with a free mind? or again, that the reward of virtue is virtue itself, while the punishment of folly and wickedness is folly itself? or lastly, that every man ought to love his neighbour, and to obey the commands of the Supreme Power? . . . I proceed to the deduction whereby he wishes to show that, 'with covert and disguised arguments, I teach atheism.' The foundation of his reasoning is, that he thinks I take away freedom from God and subject Him to fate. This is flatly false. For I have maintained, that all things follow by inevitable necessity from the nature of God, that He understands Himself; no one denies that this latter consequence follows necessarily from the divine nature, yet no one conceives that God is constrained by fate; they believe that He understands Himself with entire freedom, though necessarily. . . . Further, this inevitable necessity in things destroys neither divine laws nor human. For moral principles, whether they have received from God the form of laws or not, are nevertheless divine and salutary. Whether we accept the good which follows from virtue and the divine love, as given us by God as a judge, or as emanating from the necessity of the divine nature, it is not in either case more or less to be desired; nor are the evils which follow from evil actions less to be feared, because they follow necessarily: finally, whether we act under necessity or freedom, we are in either case led by hope and fear" (Elwes, vol. ii. pp. 365, 366).

It is only just to state, in his own words, the conviction of Spinoza that a system of inevitable necessity

is in his view reconcilable with all the characteristics of moral life, and that his own scheme is consistent through and through,—at least, he thinks so. In this relation one might refer to that chapter in the *Analogy* in which Bishop Butler discusses the theme, "On the opinion of necessity as influencing practice," in which he comes to various conclusions; among others to this, that to say anything is by necessity does not exclude choice and design, which are matters of experience. So Spinoza argues that whether "we act under necessity or freedom we are in either case led by hope and fear." But the question cannot be argued here.

Only, it is fair to state Spinoza's view, that his whole scheme of Reality has good and worthy results as it is applied to the life of man; and his persuasion that all real human experience finds a fitting place in his system. Whether logically the scheme of Reality, outlined in the first part of the *Ethics*, can be reconciled with the teaching of the other parts is another question. Meanwhile let us look at his doctrine of the human mind.

He begins with definitions of body, essence, idea, adequate idea, duration, and he explicitly identifies perfection and reality. His axioms are, that the essence of man does not involve necessary existence; that man thinks; that modes of thinking, such as love, desire, do not take place unless there be in the individual an idea of the thing desired, but the idea can exist without the presence of any other mode of thinking. One of the most important of these definitions is that of an adequate idea. "By an adequate idea I mean an idea which, in so far as it

is considered in itself without relation to the object, has all the intrinsic properties of a true idea. I say intrinsic in order to exclude that which is extrinsic, namely, the agreement between the idea and its object" (Elwes, p. 82). The definition is forced on Spinoza by his doctrine of the attributes. The attributes of Thought and Extension, to take these attributes of God which man can know, are quite different from each other. You cannot pass from one to the other. All things in Extension are to be explained from the attribute of Extension, and thought thinks from thought. How can we relate the one to the other? In truth, there is no agreement nor disagreement; each goes along by itself, and for the agreement of an idea with its object we must substitute the notion of an adequate idea. The truth of an idea belongs to it internally, and it is not made true by an agreement with its object. Further, an idea is the result of an activity of the mind. It is the mental conception which is formed by the mind as a thinking thing. Here he formally distinguishes between perception and conception. In perception the mind seems to be passive with respect to its object, in conception it is active.

We have here the problem of the relation between thought and its content, of thought and fact, of the idea to reality; or, in other aspects of the problem, the relation of mind and body, of the psychical to the physical. How numerous and varied the solutions have been, we need not say. The discussion proceeds to-day as actively as ever, and it goes on in relation to the claims of mechanism to dominate, and to make the psychical a mere accompaniment of physical

changes. Spinoza, in view of the facts as viewed by him, sets forth the doctrine of an adequate idea. He thinks that this doctrine makes the solution independent of the relation which might obtain between an idea and its object. In so doing he merely adds to the complexity of the problem, and adds the difficulty which cost Kant so many years of anxious investigation. It were a possible solution of the problem to regard the relation between object and idea as one of cause and effect. To hold that the mind is a *tabula rosa* on which the external order inscribes its method and procedure until absolute uniformities of experience have generated absolute uniformities of thought might be a possible solution, as we see from the story of English philosophy from Locke to Herbert Spencer. Or we might avoid the problem by saying that each order goes along by itself, and their agreement is only a coincidence brought about by an external power. Or we might call them the convex and concave aspects of the same series; or call in the aid of the double-aspect theory. In all of these there is the recognition of a problem to be solved, and but scanty success in the solution proposed.

Does the doctrine of the adequate idea help us in any way? It adds to the difficulty. For it brings in the independent activity of the mind, and brings no help to us in seeing how the independent activity of the mind can reach results which agree with the order of things. This is that aspect of the problem set forth by Kant in a letter to Marcus Herz, of date 9th February 1772. He writes to Herz to tell him of a projected treatise to consist of two parts: (1) Phenomenology, and (2) on Metaphysics. He explains what progress

he had made, and describes the emergence of a difficulty hitherto neglected by all metaphysicians, as it had been neglected by himself. "On what ground rests the relation of what we call a presentation to its object?" If the presentation is an effect wrought by the object as a cause, then the determination of consciousness may present something—it may have an object. The passive or sensuous presentations have an intelligible relation to objects, and the principles which are taken from our minds have an intelligible worth for all things, so far as they are the objects of our senses. Having spoken of various possible solutions, Kant observes "that our understanding is through our presentations neither the cause of the object nor is the object the cause of the presentations of the understanding." He says that in the Dissertation he was content to characterise presentations in a merely negative way, and had said that sensuous things present things as they appear, intellectual presentations as they are. But how are things given to us if not in the way in which they affect us, and if such intellectual presentations rest on our inner activity whence comes the agreements with objects which are not produced by them? And the principles (axiomata) of pure reason which are independent of experience, how and why do these agree with objects, and how are they valid? Kant's perplexity is, at this time, that he can give no reasonable account of the agreement between reason and things (see the letter in Kant's *Gesammelte Schriften*, Band i. pp. 123–130). How can reason *à priori* form to itself notions of things with which things necessarily agree, and how can reason set forth principles with which experience shall agree? In other words, what is

the source of the agreement between reason and things? is the problem set forth by Kant; and the answer to which forms the scope of the critical philosophy.

Is Spinoza aware of the problem? Yes, and no. He is aware of it in so far as he finds that he must have a system of ideas which can be understood in themselves without reference to their agreement with their objects. He must conserve the independence of the attributes. Extension must be explained by extension, and thought by thought. Nor does he bring these in relation to each other, though he admits that Extension is intelligible to thought, while thought can think itself, and also think Extension. But what is the explanation of the intelligibility of the universe? The answer of Spinoza is the answer of all believers in the absolute, from Parmenides onwards, though he expresses it as bluntly as any one of them ever did. Proposition 7, Part II.: "*Orde et connexio idearum idem est, ac ordo et connexio rerum.*" The proof is that everything that is caused depends on a knowledge of the cause of which it is the effect. Granted, but why should a knowledge of a cause in the attribute of Extension lead to a knowledge of an effect in the order of ideas? or *vice versâ*. He has just told us that each attribute is conceived through itself without any other; why should the order and connection of ideas give the order and connection of things? There is no answer save that "whatsoever can be perceived by the infinite intellect as constituting the essence of Substance belongs altogether only to one Substance; consequently, Substance thinking and Substance extended are one and the same Substance, comprehended now through

one attribute, now through the other; so also, a mode of extension and the idea of that mode are one and the same thing, though expressed in two ways."

Why should the thing be expressed in two ways? A mode of extension is to be explained by reference to the attribute of extension, and so of an idea. There is no possibility of contact between the two attributes till we trace them back into the one Substance, and even there they remain in their distinctness. On the other hand, the necessities of his system compel Spinoza to postulate points of contact between modes of extension and modes of thought everywhere, and the possibility of such is never established, and can never be, on the view of the mutual independence of the attributes.

Leaving this problem, let us endeavour to follow him as he sketches the outline of a possible science of nature. It will be well to remember, in this connection, the warning of Clerk Maxwell: "The notion that space is the only form of 'material' substance, and all existing things but affections of space, forms one of the ultimate foundations of the system of Spinoza. I shall not attempt to trace it down to more modern times, but I would advise those who study any system of metaphysics to examine carefully that part of it which deals with physical ideas" (*Matter and Motion*, p. 18). Keeping this advice in view, let us look at the series of physical propositions which set forth Spinoza's conception of physical science. Bodies are not distinguished from each other in respect of substance, but only in respect of motion or rest. The motion or rest of a body is determined by another body, and this again by another, and so on. The manner in which a body is determined depends partly

on its own nature, partly on the nature of the body affecting it. "When any given bodies of the same or different magnitudes are compelled by other bodies to remain in contact, or if they be moved at the same or different rates of speed, so that their mutual movements should preserve among themselves a certain fixed relation, we say that such bodies are in union, and that together they compose one body or individual, which is distinguished from other bodies by this fact of union" (Elwes, p. 95). Thus an individual may remain the same, though new parts may be added, other parts taken off, or though the magnitude and motions of parts change. The oneness is in the combination. Many such individuals may form an individual of a higher order, and these again form a unity, till the whole of nature may be regarded as a single individual. The individual remains the same, though the parts vary in infinite ways.

Properties of matter are thus limited to the qualities of motion and rest, for he expressly says that "bodies are individual things which are distinguished from each other in respect to motion and rest." He has no explanation of the possibility of motion in a matter which has only the attribute of extension, nor has he indicated how there can be that aggregation of space which he calls a body. In fact, the differences within the attribute of extension are inconsistent with the unity of the attribute, and *vice versa*; and the notion of inertia which lies at the basis of his system of physics is added empirically, and without explanation, to his system.

As every attribute expresses the whole of existence, every form under the one attribute must correspond

with a form under the other attribute. There is a correspondence between grades of individuality in the attribute of extension and ideas in the attribute of thought. His postulate about the human body is, that it "is composed of a number of individual parts of diverse nature, each one of which is in itself extremely complex." To each of these there is a corresponding idea. Mind and body are one and the same mode of substance, and that which under the attribute of extension are modes of motion appear under the attribute of thought as forms of thought. The human body is affected by bodies external to it, and affects them, and the mind perceives the interaction; but he will not permit us to say that the mind influences the body or the body the mind. Body is influenced by body, and the action of the mind is limited to thinking. The belief that the mind can set the body in motion really means that we do not know how such motion has arisen. He will not explain mental phenomena by material, or the reverse. Each goes along by itself. But he uses the postulated parallelism of the two to throw light on many problems. "The idea of every mode in which the human body is affected by external bodies must involve the nature of the human body, and also the nature of the external body" (Prop. 16). In modern language, every sensation answers to a bodily condition, and, indeed, to the nature of both bodies. The affection will continue, until the human body is affected in such a way as to exclude the existence or the presence of the external body. By the association of ideas the mind is able to regard as present external bodies, though they be no longer in existence or present. The association of ideas corresponds to the

law of motion in the sphere of extension. But laws of association are not laws of thought proper, for thought proper regards things *sub specie æternitatis*. We may note here the explanation of memory. "It is simply a certain association of ideas involving the nature of things outside the human body, which association arises in the mind according to the order and association of the affections of the human body" (Elwes, p. 100).

Thus imagination and memory resemble each other. We can imagine a body to be present even though it is not acting on us, and we can recall a mental picture of an external object without its actual presence. The mind knows the body and its existence only through ideas of an affection of the body; the knowledge of our own body is primary, and the idea of an external body is through an affection of our body, for the "order and connection of ideas is the same as the order and connection of causes." In imagination we picture states of our own bodies, and interpret them as results of the action of external bodies. Strictly, ideas of the modifications are those which involve the nature of the human body and of external bodies; they do not answer to that concatenation of ideas which arise from the order of the intellect, whereby the mind perceives things in their primary causes, and which in all men is the same. The content of the imaginative experience arranges itself according to the disposition of the individual. This experience Spinoza calls "*Cognitio primi generis, opinio, vel imaginatio*." In the course of description of the notions which are common to all men he has occasion to mention those which belong only to the individual, and he gives a short account of them.

Not to omit anything necessary to be known, he sets down causes whence are derived the terms called transcendental, such as *ens*, *res*, *aliquid*. These may be described as universals of imaginative experience. The human body, being limited, can only form a certain number of images; if this number be exceeded the outline will become blurred, and the images become confused. The images being confused in the body, the mind confusedly imagines, and will comprehend them under one attribute, being, thing, and so on. Similarly arise general notions, such as man, horse, dog; they arise from the fact that so many images, for instance, of men, are formed simultaneously in the human mind that the powers of imagination break down, not indeed entirely, but to the extent of losing count of small differences between individuals, and the mind invents a predicate to express something which an infinite number of individuals possess in common. He recapitulates what he said thus: "From all that has been said it is clear that we in many cases perceive and form our general notions:—1. From particular things represented to our intellect fragmentarily, confusedly, and without order through our senses; I have settled to call such perceptions, *Cognitiones ab experientia vaga*. 2. From symbols; for example, from the fact of having read or heard certain words we remember things and form certain ideas concerning them similar to those through which we imagine things. I shall call both these ways of regarding things knowledge of the first kind, opinion, or imagination. 3. From the fact that we have notions common to all men, and adequate ideas of the properties of things; this I call reason and knowledge of the second kind. Besides these two kinds of

knowledge there is a third kind of knowledge, which we will call intuition" (Elwes, p. 113).

We have already seen what Spinoza means by imaginative experience. It has its value; in fact, according to him, the knowledge of the great majority of men, the knowledge of everyday life, is of this kind. If we are aware that these experiences are imaginative, if we imagine things as vividly as if they were present, that may be an advantage; the error arises when we think they are present because we imagine them vividly. We make mistakes also in the interpretations of our perceptions, as when we misjudge distance, and so on. As regards this sphere of imaginative experience, Spinoza makes it very extensive, and its influence very great. From it men can only have a partial knowledge of themselves, their bodies, and of external bodies, and men mistake this vague and fragmentary knowledge for knowledge in its completeness. It is this mainly that prevents men from obtaining a knowledge of the eternal and necessary order of things; each man shuts himself up in that partial knowledge which comes from imagination, and the partial swallows up the opportunity of the whole. It is needless to dwell on it, though Spinoza does so at great length. In some respects it is a fruitful and instructive discussion, but when Spinoza sets down all the applications of our moral ideals to the universal substance as instances of the undue use of the imagination we may without discussion demur.

Briefly, he calls knowledge of the first kind the only source of falsity, while knowledge of the second and third kinds is necessarily true, and enables us to distinguish the true from the false. To have a true idea

is to know that we have a true idea, and to doubt the truth of it is impossible. Can we attain to true and adequate ideas? Yes, for there is a concatenation of ideas which exists according to the order of the intellect, by which the mind perceives things through first causes: and which is the same in all men. If we can discover among the ideæ of the bodily affections some which are adequate, these will form the basis of true and valid scientific inference. One criterion is that they must be "the same for all men." They must therefore be the outcome of the mind itself, and the product of its activity. Here we are brought back to the fundamental principle of the philosophy, the reference to the intelligence of God so far as He constituted the minds of an infinite number of finite things. If we grasp this thought, truly we shall find that the perception of a part of the universal property will give us an adequate idea of it, for the part is part of the whole. For modes, whether of extension or of thought, must present in all their parts and as wholes certain identical and uniform properties. Corporeal nature is one, and being one it has certain properties, and these properties give us the axioms of mathematics and physics. These common notions which all men share are the starting-point of objective and universal knowledge; scientific knowledge are these *communes notiones* which express the common properties of things, and in his own words they are, "Res, quas clare et distincte intelligimus, vel rerum communes proprietates sunt, vel quae ex iis deducuntur."

Axioms and deductions from them, adequate ideas of notions common to all men and reasoned inferences from them, is science according to Spinoza. And the

Ethics is just the exhibition of such knowledge. The demonstrations from the *Notiones communes* are just as good as the notions themselves, for "Mentis enim oculi, quibus res videt observatque, sunt ipsæ demonstrationes." But reason regards things *sub specie æternitatis*, and such regard has reference not to contingent things but to necessary; that is to say, it has regard not to any particular thing in its particularity, but to those necessary properties which all things have in common, and to the common notions which all men have of them. We pass from the imaginative view of the world, which has regard to the world of things in their variety, colour, and changeableness, and we have to look at the world as a system of necessary laws, to which time has no reference. Thus for Spinoza scientific thought leaves on one side all the manifoldness of the world, gives no explanation of the "thinghood" of things, nor of how these unite in the order of the whole. Individuality, which has significance for him when he comes to speak of the *Conatus sese conservandi*, has no meaning for scientific thought in its contemplation of the eternal order. Science abstracts from local and temporal conditions, and while it may deal with something real it is still abstract, and can give no adequate account of concrete experience.

"It is in the nature of reason to perceive things *sub quâdam æternitatis specie*." So in the second corollary of Proposition 44. The proof is worth quoting. "It is in the nature of things to regard things not as contingent, but as necessary. Reason perceives this necessity of things truly, that is, as it is in itself. But this necessity of things is the very necessity of the eternal nature of God; therefore it is in the nature of reason to

regard things under this form of eternity. We may add, that the bases of reason are the notions which answer to things common to all, and which do not answer to the essence of any particular thing; which must therefore be conceived without any relation to time, under a certain form of eternity" (Elwes, p. 117). Thus we are led to the conclusions that every idea of every body, or of every thing actually existing, necessarily involves the eternal and infinite essence of God, and that the knowledge of the eternal and infinite essence of God, which every idea involves, is adequate and perfect, and so the human mind has an adequate knowledge of the eternal and infinite essence of God. He has not explained how the particularity of particular things which is neglected in the common notions is still valid as involving the eternal and necessary existence of God. These are only side by side. The particularity which is without significance for common notions must be brought back somehow, and it reappears, as it had disappeared, because Spinoza cannot do without it.

But perhaps the explanation is to be found in the third kind of knowledge of which he spoke in the Scholium to Proposition 40. In the Scholium to Proposition 47 he says: "Hence we see that the infinite essence and the eternity of God are known to all. Now, as all things are in God, and are conceived through God, we can from this knowledge infer many things which we may adequately know, and we may form that third kind of knowledge of which we spoke" (Elwes, p. 118). In Part V. Proposition 36, Scholium, he says: "Since the essence of our minds consists solely in knowledge, whereof the beginning and the founda-

tion is God, it becomes clear to us in what way our mind, as to its essence and existence, follows from the divine nature and constantly depends on God. I have thought it worth while here to call attention to this in order to show by this example how the knowledge of particular things, which I have called intuitive or of the third kind, is potent and more powerful than the universal knowledge which I have styled knowledge of the second kind." Into this we shall not enter further, for this kind of knowledge is possible only to a mind which is at the centre, and to which the whole of reality is open. This part of the *Ethics* ends with a discussion of free will, and a demonstration that will and understanding are one and the same. "In the mind there is no absolute or free will, but the mind is determined to wish this or that by cause, which has been determined by another cause, and so on to infinity" (Prop. 48). There is in the mind no volition or affirmation or negation save that which an idea, inasmuch as it is an idea, involves; these are the propositions which end the second part, and to Spinoza they are so important that he devotes a few pages to the establishment of them, and to criticisms of their opposites.

Will and understanding are nothing beyond the individual volitions and ideas; so Spinoza, anticipating Hume, says; and a particular idea and a particular volition are one and the same, therefore will and understanding are one and the same. The will and the understanding are for Spinoza mere abstract terms, and have reality only in particular ideas and volitions. It may be frankly admitted that the distinction between will and understanding has often

been made too absolute, and that the faculty doctrine has been sometimes so emphatically expressed that men have lost sight of the unity of mental life. It is well to be reminded that there is something in common in understanding and will, if nothing more than that they are activities of the same subject. But they are different forms of activity, and must be distinguished so far as they are different. Spinoza disregards the unity of the mental life, and for him unity is not to be sought or found in man, but in God. From that point of view it is possible to disregard the testimony of consciousness, and to refuse to regard the synthetic unity of apperception as a necessary source of explanation of our mental life and of the unity of our experience. We do obtain a certain kind of unity, but it has the disadvantage of being out of relation to our experience. For every explanation of experience postulates in some sense a unitary centre to which all our experience is referred. No doubt it has been said that volition is only the self-realisation of an idea, but that is to substitute the idea for the self as the source of the explanation of the unity of our mental life. It is a hard question to answer, how far Spinoza recognises a unity of our mental life, or a subject as the bearer of an experience. How far he could recognise ideals as a source of action can hardly be decided, for in one sense he admits them and in another sense he denies them. At all events, the identification of will and understanding cannot be maintained, for they are different, and represent various functions within the unity of our mental life.

We shall come across another definition of the will

when we follow Spinoza into the third part of the *Ethics*, which cannot easily be explained as consistent with the proposition that intellect and will are one and the same. "Hic conatus, cum ad mentem solam, refertur, voluntas appellatur, sed cum ad mentem et corpus simul refertur, vocatur appetitus; qui proinde nihil aliud est quam ipsa hominis essentia, ex cujus natura ea, quæ ipsius conservationi inserviunt, necessario sequuntur; atque adeo homo ad eadem agendum determinatus est. Deinde inter appetitum et cupiditatem nulla est differentia, nisi quod cupiditas ad homines plerumque referatur, quatenus sui appetitus sunt conscii, et propterea sic definiri potest, nempe cupiditas est appetitus cum ejusdem conscientia. Constat itaque ex his omnibus, nihil nos conari, velle, appetere, neque cupere, quia ad bonum esse judicamus; sed contra, nos propterea aliquid bonum esse judicare, quia id conamur, volumus, appetimus, atque cupimus" (Part III. Prop. 9, Scholium). Thus ideas are dependent on impulse and will; will is no longer identical with the understanding, for will is the conscious impulse towards self-preservation.

CHAPTER XII

The Last Three Books of the *Ethics*—The *Conatus sese conservandi*—Its Meaning and its Consequences—Pleasure and Pain—The Primary Emotions and their Derivatives—Description and Appreciation—Ethical Judgments illusive—Good—Utility—Timeless Causation—The Vanishing of Emotion—Social Ethics—The State—The third Kind of Knowledge—The Intellectual Love of God—Immortality—Place, Blessedness, and Virtue.

THE three last books of the *Ethics* are of great importance in their place in the system of Spinoza, and also in themselves, for they contain some of the most fruitful and most valuable work he has done. The third book deals with the origin and nature of the emotions (*affectum*), the fourth book with the bondage of man, and the fifth with the freedom of man. Our waning space compels us to condense, and our account of these books must be extremely brief.

The psychology of the feelings may be studied apart from the implications of his system, and in a measure ought to be so. For the account of the rise and growth of the emotions is an independent study, and, while he finds it necessary to make reference now and then to the one substance, these are more formal than real. He begins by stating that he is to approach the study of the emotions in a purely scientific spirit,

that he is to study them with an impartiality as great as that with which he studies geometrical forms. He is not to praise or blame, not to despise or mourn over them; he seeks to understand them. He does not regard them as of the same kind, or on the same level as geometrical forms; he means only that they are caused, are intelligible, and may be understood; but the causes in operation are not identical with the causes which explain figures in geometry.

The quotation at the close of the foregoing chapter seems to indicate that we have to change our view when we pass from the first two books of the *Ethics* to the last three. The first two books culminated in the identification of understanding and will. Will is the affirmation or negation of the idea, and ideas represent the activity of the mind. When he comes to the study of the emotional nature of man he finds some phenomena which are not consistent with the view that it is ideas which determine the phenomena of mental life. Why are we active? Is it from a desire for good? In the foregoing quotation we are told: "We do not strive for, wish, seek, nor desire anything because we judge it to be good; we judge it to be good because we strive for, wish, seek, or desire it." Ideas flow from the striving, and are the effect of them; in other words, *voluntas* is the prior, and *intellectus* flows from it, and that relation cannot be a relation of identity.

The *Conatus sese conservandi* is the expression of the nature of every individual thing. This *conatus* is the form which the infinite divine activity in all existence takes when it is embodied in any individual,

and it takes on the form which is the nature of each individual thing. It is one thing as expressed in the law of inertia, it is another thing in more complex natures, but everywhere existence is self-conservation. *Appetitus* attended with consciousness is desire, and although this is somewhat doubtful it is possible that Spinoza does make consciousness to be an element in the effort towards self-conservation. Desire from the mental side is will; when referred to mind and body in conjunction it is called *appetitus*.

Of great significance is the view of pleasure and pain, and of the part they play in life. "We see that the mind can undergo many changes, and can pass now to a greater and now to a less state of perfection, which passive states (*passiones*) explain to us the emotions of pleasure and pain. By pleasure therefore, here and in the following propositions, I shall understand the passion by which the mind passes to a great perfection, and by pain (*tristitiam*) that by which it passes to a less perfection" (Prop. 11, Scholium). Pleasure, pain, and desire are the three primary emotions; beyond these three he recognises no primary emotions, and from these he undertakes to show how all other emotions are derived. Let it be noted that the feelings of pleasure and pain arise from the transition from one state to another, and feeling is supposed to answer to a change of condition.

Pleasure accompanies furtherance of life, and pain is the sign that life is hindered. It would be of interest, had we time, to trace the steps by which Spinoza traces the evolution of specific kinds of feeling from the primary emotions of pleasure, pain, and desire. The principle of association is elucidated,

drawn upon, and the chemistry of the growth of feeling is set forth so as to be a permanent gain to psychology. Love and hatred are explained by the fact that we love what gives us pleasure, we hate what gives us pain. The evolution of the emotions of hope, fear, and confidence, of emulation, gratitude, benevolence, anger, revenge, cruelty, timidity, daring, cowardice is explained, and their evolution out of the primary desires and emotions is described in a most suggestive and instructive manner. Here Spinoza is on the level of ordinary human experience, and has helped us greatly to understand the evolution of our mental life. The point where difficulty may be felt is how we are to connect what he calls the primary emotions with the fundamental proposition of his psychology, namely, the *Conatus sese conservandi*, with the primary emotions. Take the primary emotions and the law of association, and we can understand the conditions of the growth of feeling; but whether these primary emotions can be understood from the simple principle of self-conservation is another question, which is too large for discussion here.

Something might be said of the account of the moral emotions given by Spinoza, which we think to be inadequate. "Repentance is pain accompanied by the idea of some action, which we believe we have performed by the free decision of our mind" (Elwes, p. 179). In the explanation attached to the proposition he says: "This is perhaps the place to call attention to the fact that it is nothing wonderful that all these actions which are commonly called *wrong* are followed by pain, and all those which are

called *right* are followed by pleasure. We can easily gather from what has been said that this depends in great measure on education. Parents, by reprobating the former class of actions, and by frequently chiding their children because of them, and also by persuading to and praising the latter class, have brought it about, that the former should be associated with pain and the latter with pleasure" (Elwes, p. 179). It is not a sufficient explanation of repentance, or of right and wrong. He points out certain elements in the complex experience indicated by these terms, but the course of ethical thought up to the present time proves that he has not taken account of all the elements of moral experience.

For one thing, Spinoza could not do full justice to the ethical experience of man, because he had denied the category of time, and did not allow to time any positive content or value. He expressly denies to our appreciation any objective value. If all human activity of thought can be exhausted in the two functions of description and appreciation, as it is the tendency of modern thought to affirm, then by Spinoza the work of description is the work of reason, and the work of appreciation is the work of imagination. Appreciation arises in a world in which freedom has a real meaning, in which change, opposition, genesis, growth are real, and in which judgments of worth are of value. The process of evolution must be a real process, and the judgment as to the worth of the process must be of some value. But ethical distinctions and ethical judgments are of no significance within the *Natura naturans*; if they are to have significance, they can obtain a footing only within the *Natura naturata*.

Even within the *Natura naturata* appreciations have only a relative value. We have to bear this in mind as we proceed to read the ethical definitions and descriptions set forth in the fourth part of the *Ethics*. "By good I mean that which we certainly know to be useful to us. By evil I mean that which we certainly know to be a hindrance to us in the attainment of any good; particular things I call contingent in so far as, while regarding their essence only, we find nothing therein which necessarily asserts their existence or excludes it. Particular things I call possible in so far as, while regarding the causes whereby they must be produced, we know not whether such causes be determined for producing them. By an end, for the sake of which we do something, I mean a desire. By virtue and power I mean the same thing, that is, virtue, in so far as it is referred to man, is a man's nature or essence, in so far as it has the power of effecting what can only be understood by the laws of that nature" (Elwes, pp. 190, 191).

The notion of good is defined in relation to *utilitas*, and evil is only a hindrance to the attainment of good. There is such a thing as End, but the end for which we do something is desire. Thus we are allowed in a sense to move within the world of time "change," and to foresee ends and act on them, and to attach a meaning to ethical terms; and sometimes we are permitted to lose sight of the scheme of causation, and to regard other kinds of causes than the formal cause. We come within measurable distance of being allowed to think of man as self-determining, not as merely determined. The *Conatus se conservandi* attains to some fulness of ethical meaning, and may be understood as

the attempt to free ourselves from the dominance of the feelings and passions excited within us by something merely external to us.

But ever and anon Spinoza places us in the timeless scheme of causation, and we are constrained to regard the evolution of our emotions, ideas, and conduct as without significance in the intelligible scheme of things. When we look at men or things from the point of view of the *Conatus sese conservandi*, and note the influence attributed to it in the growth of mental life, we feel that we are in a real world and that we are really interpreting human experience; but suddenly the scene changes, and we are reminded that this has no real value: it is the work of imagination. Then as we read we are in the midst of a series of kaleidoscopic changes, and have a series of identifications which are bewildering. We read on about the *Conatus sese conservandi*, and we find that "Virtus est ipsa humana potentia, quæ sola hominis essentia definitur, hoc est, quæ solo conatu, quo homo in suo esse perseverare conatur, definitur" (Prop. 20, Part IV., Demonstration). And in the corollary to Prop. 22 we are assured that "*Conatus sese conservandi primum et unicum virtutis est fundamentum.*" We have thus only to trace the consequences of the principle of self-conservation in order to arrive at virtue. But we have to make this consistent with Spinoza's contention, that the real nature of men consists in pure knowledge. As far as man is concerned, it must lead to the conclusion that self-preservation in man leads to the development of knowledge. "*Rationis essentia nihil aliud est quam mens nostra, quatenus clare et distincte intelligit: ergo quicquid ex ratione conamur, nihil aliud est quam intelligere. Deinde quoniam hic mentis*

conatus, quatenus ratiocinatur, suum esse conatur conservare, nihil aliud est quam intelligere; est ergo hic intelligendi conatus primum et unicum virtutis fundamentum, nec alicujus finis causa res intelligere conabimur; sed contra mens, quatenus ratiocinatur, nihil sibi bonum esse concipere poterit nisi id, quod ad intelligendum conducit" (Prop. 26). Thus we have two foundations of virtue, each of which has the distinction of being *Primum et unicum*. The *Conatus sese conservandi* in the case of man becomes the *Conatus intelligendi*, and man becomes a pure intelligence. Feeling, emotion, tends to disappear, and the essence of man is that he exists in order to understand. This is put alongside of the account of the emotions, which have been treated in the most realistic way, as something positive, and as real powers of human nature.

He had told us that emotion can only be destroyed or controlled by another emotion; in other words, that pure understanding is powerless to act as a motive, and he had further told us that there are emotions applicable to the mind as active; and here, in describing the second foundation of virtue, he brings us back to pure intellectualism. We quote from the Scholium from Proposition 59, Part III.: "All actions following from emotion, which are attributable to the mind in virtue of its understanding, I set down to strength of character, which I divide into courage and highmindedness. By courage, I mean the desire whereby every man strives to preserve his own being in accordance solely with the dictates of reason; by highmindedness I mean the desire whereby every man endeavours, solely under the dictates of reason, to aid other men, and to unite them to himself in friendship" (Elwes, pp. 171, 172).

It is noticeable that the language of Spinoza is teleological while he is dealing with the emotions, and striving to explain their genesis and growth from the primary emotions of pleasure, pain, and desire. As soon as he makes the essence of man to be pure intelligence he loses sight of teleology and he becomes abstract, and his system loses touch with experience.

The foregoing quotation contains the mode of transition by which Spinoza passes from individual to social ethics. He makes the transition without notice and without argument. He makes no endeavour to reconcile egoism and altruism; indeed, it did not appear to him as a problem to be discussed. He simply says, as a matter of description or definition: "Eas itaque actiones, quæ solum agentis utile intendunt, ad animositatem, et quæ alterius etiam utile intendunt, ad generositatem refero" (Part III., Prop. 59, Scholium). It may be a good definition, but some account might have been given of how the *Conatus conservandi* can be transformed into a care for the welfare of others. Apart from the failure to recognise that there is a problem to be solved, the social side of his *Ethics* is worthy of the highest admiration. Good is that which is in harmony with our nature, and from its very nature it must be a common good. Men are active in so far as they act in obedience to reason, and by the laws of their nature they desire what they call good and seek to remove what they consider bad; and so far as men live in harmony with reason they necessarily do such things as are good for human nature, and therefore good for each individual man. The good which each follower of virtue seeks for himself he will desire for others. "Deinde cupiditas, quatenus ad mentem refer-

tur, est ipsa mentis essentia : mentis autem essentia in cognitione consistit, quæ involvit Dei cognitionem, et sine qua nec esse nec concipi potest : adeoque quo mentis essentia majorem Dei cognitionem involvit, eo cupiditas, qua is, qui virtutem sectatur, bonum, quod sibi appetit, alteri cupit, etiam major erit" (Prop. 37, Part IV.). We quote this, not only for the meaning, but also because it contains one of these rapid identifications with which Spinoza bewilders his readers. The essence of the mind is desire, and the essence of the mind is knowledge. In fact, the mind has too many essences in these pages.

Apart from that, one recognises the truth and greatness of Spinoza's ethical teaching in many passages of his works. He teaches that the good is a common good, and what a man desires for himself and loves he will love more constantly if he sees that others love it also; he will endeavour that others love it also, and as all can rejoice in the common good he will strive that they all rejoice in it. "To man there is nothing more useful than man : nothing, I say, could men choose for the conservation of their own being more than that they should all agree in all respects; that the minds and bodies of all should form, as it were, one mind and one body, and all at the same time, as far as they could, attempt to preserve their own being, and all at the same time should seek for themselves the common utility of all; from which it follows that men who are governed by reason, that is, men who under the guidance of reason seek their own advantage, desire for themselves nothing which they do not also desire for the rest of mankind, and so are just, faithful, and honourable" (Part IV., Prop. 18, Scholium). After a description of the man who has made himself master of

himself, or of the man who is ruled by reason alone, in which he tells us that a free man thinks of nothing less than of death, that his meditation is not of death, he passes on to a vivid description of the man who has won his freedom. On this we do not dwell, we say only, that it is a fascinating picture which he draws, and one well worthy of our study.

At this stage he passes on to the study of the State, and his ethical study is united to his political philosophy. The theory of the State is merely mentioned in the *Ethics*; it is developed at length in his other works. But we must leave his political and theological works untouched, as they demand a work devoted to them alone. We shall give only one quotation, and pass to the last chapter of the *Ethics*. "Every man exists by sovereign natural right, and consequently, by sovereign natural right, performs those actions which follow from the necessity of his own nature; therefore, by sovereign natural right every man judges what is good and what is bad, takes care of his own advantage according to his own disposition, avenges the wrongs done to him, and endeavours to preserve what he loves and to destroy what he hates. Now, if man lived under the guidance of reason, every one would remain in possession of this his right, without any injury being done to his neighbour. But, seeing that they are a prey to their emotions, which far surpass human power or virtue, they are drawn in different directions, and, being at variance one with another, stand in need of mutual help. Wherefore, in order that men may live together in harmony and may aid one another, it is necessary that they should forego their natural right and, for the sake of security,

refrain from all actions which can injure their fellow-men" (Elwes, p. 214). He lays down the nature and power of the State, and the ideas on which it is founded, and makes the following ethical deduction from what he has said: "From all these considerations it is evident that justice and injustice, sin and merit, are extrinsic ideas, and not attributes which display the nature of the mind" (Elwes, p. 215).

Passing to the fifth part of the *Ethics*, we note that the view of knowledge, which was rather held in abeyance in the third and fourth parts, appears in all its grandeur. The emotions have been subdued, are held in hand at least, and feeling is attenuated almost to nothingness. We have ascended to the whole, have recognised that we are in the whole, and have our place and function in it. It is possible for man to form clear and distinct conceptions, and properties which are common to all things can be conceived adequately. It follows that we may form a clear and distinct conception of every emotion, and to understand our emotions is to have the power of controlling them. The more the knowledge that things are necessary is applied to particular things, the greater is the power of the mind over the emotions. The emotions are brought under control in proportion as we understand them, and we understand them in so far as we are enabled to think them in relation to their causes, and to bring them under the conception of universal necessity. Universal necessity lifts us out of our isolation, and enables us to see ourselves as included in the universal Being, and one with God. The mind can bring it about that all bodily modifications or images of things may be referred to the idea of God.

The next step is swiftly taken, and leads us into one of the most interesting and characteristic positions of the philosophy of Spinoza. It unites knowledge with love. "He who clearly and distinctly understands himself and his emotions loves God, and so much the more as he the more understands himself and his emotions" (Prop. 15, Part V.).

At one step we pass the boundary between emotion and knowledge, and in a phrase, "*Amor intellectualis Dei*," we unite the two. We look back to Spinoza's definition of love, and we find it to be, Love is pleasure, accompanied with the idea of an external cause, and we can find no way of transition from the emotion to the intellect. We find pleasure in the exercise of our highest activity, which is the exercise of thought, and we find pleasure at the thought of that Being who is the source of the joy with which knowledge fills us. But Spinoza has not explained how the union has taken place. For love has the idea of an external cause accompanying it, and yet in the highest reach of thought, according to Spinoza, externality has disappeared, and we are one with God. In truth, Spinoza has need of the beautiful conception of the intellectual love of God, and he makes the synthesis without explaining it. From it he draws significant consequences. One is that our love to God is a part of the infinite love with which God loves Himself. God's love to man and man's love to God are one and the same. We see ourselves and all things *sub specie æternitatis*. This intellectual love, human and divine, is exalted, till all becoming and opposition are lost sight of, and we are landed in a mysticism in which all intelligible relations have vanished. It is a beautiful thought this

of intellectual love; but love is an emotion, and emotion is feeling, and, according to Spinoza's psychology, feeling arises only when a transition takes place. How, then, can there be, on his own showing, a feeling in relation to a timeless, changeless state of things?

He develops his doctrine of knowledge still further, and in close relation with this evolution is his doctrine of immortality. It is a kind of conditional immortality, and it depends on the growth of the individual in knowledge. "Our mind, in so far as it knows itself under the form of eternity, has to that extent a knowledge of God, and knows that it is in God, and is conceived through God" (Elwes, p. 262). The third kind of knowledge, namely, intuitive knowledge, depends on the mind so far as the mind is eternal. We delight in this kind of knowledge, and our delight is accompanied by the idea of God as cause. It is from this third kind of knowledge that the intellectual love of God necessarily arises, and this intellectual love of God is eternal. "The power of the mind is defined by knowledge only, and its infirmity or passion is defined by the privation of knowledge only; it therefore follows that the mind is most passive whose greatest part is made up of inadequate ideas, so that it may be characterised more readily by its passive states than by its activities. On the other hand, that mind is most active whose greatest part is made up of adequate ideas, so that, although it may contain as many inadequate ideas as the former mind, it may yet be more easily characterised by ideas attributable to human virtue than by ideas which tell of human infirmity" (Elwes, p. 258). The greater the number of adequate ideas, and the

fewer the number of inadequate ideas there is in any mind, the greater is the power of the mind to view itself *sub specie æternitatis*. Is there, then, immortality? Yes; for "the human mind cannot be absolutely destroyed with the body, but there remains something of it which is eternal" (Prop. 23, Part V.). We cannot, he says, assign to the mind duration except while the body endures. "Yet, as there is something notwithstanding which is conceived by a certain eternal necessity through the very essence of God, this something, which appertains to the essence of the mind, will necessarily be eternal" (Elwes, p. 259).

We may quote the Scholium to Proposition 23: "This idea, which expresses the essence of the body under the form of eternity, is, as we have said, a certain mode of thinking which belongs to the essence of the mind, and is necessarily eternal. Yet it is not possible that we should remember that we existed before our body, for our body can bear no trace of such existence, neither can eternity be defined in terms of time or have any relation to time. But, notwithstanding, we feel and know that we are eternal. For the mind feels those things that it can conceive by understanding, no less than those things that it remembers. For the eyes of the mind, whereby it sees and observes things, are none other than proofs. Thus, although we do not remember that we existed before the body, yet we feel that our mind, in so far as it involves the essence of the body under the form of eternity, is eternal, and that thus its existence cannot be defined in terms of time, or explained through duration" (Elwes, p. 260).

Thus the immortality advocated here is out of rela-

tion to time. That part of the mind which endures is more perfect than the rest. He expressly says that "the eternal part of the mind is the understanding, and the perishable part is the imagination" (Prop. 40, Cor.). In other words, the mind endures so far as it is active, and perishes so far as it is passive. This brings us back again to the intellectual view that only those attain to immortality who rise to the third kind of knowledge. Those who become organs of the divine activity of thought endure, and cannot cease to be. He has hinted that eternal persistence may mean existence before the body, and may exist after it; but he has not explained how growth in knowledge, and the attainment of the third kind of knowledge, which is a process taking place in time and which is a condition of possible immortality, is connected with eternal persistence.

As if conscious that his peculiar doctrine of immortality could not afford a foundation for conduct for ordinary people, he states that, "even if we did not know that our mind is eternal, we should still consider as of primary importance piety and religion, and generally of all things which, in Part IV., we showed to be attributable to courage and high-mindedness" (Prop. 41). In the proof he says: "The first and only foundation of virtue, or the rule of right living, is seeking one's own interest. Now, in order to determine what reason describes as useful, we took no account of the mind's eternity. Although we were ignorant at that time that the mind is eternal, we nevertheless stated that the qualities attributable to courage and high-mindedness are of primary importance. Therefore, if we were still ignorant of this

doctrine, we should yet put the aforesaid precepts of reason in the first place." It is well, for the eternity of the mind turns out to be an eternity of only a part of the mind, and it is an eternity only for that mind which attains to the third kind of knowledge.

Blessedness is not the reward of virtue, it is virtue itself; neither do we rejoice therein because we control our lusts: but, contrariwise, because we rejoice therein we are able to control our lusts. Such is the final proposition of this memorable book. The proof of the proposition is a final attempt to unite love and knowledge. For blessedness consists in love towards God, which springs from the third kind of knowledge. But the more the mind rejoices in this love, so does it the more understand. Thus the love increases the power to understand, and the increase of the power to understand adds to the power of loving. The mere intellectualism of his system is thus redeemed by the practical power of love, and feeling has found a place in the final outcome. It is a question whether on his system, and in consistency with the function he ascribes to mere thinking, he has any right to bring in love in the final outcome. But if we do not see how he can legitimately bring it in, we are glad to find it there, for it redeems the system from barrenness, and gives a glow of sunset colour to the final book of the *Ethics*.

Spinoza lays stress on the strenuous mood. Peace, blessedness, virtue are to be won, and it is not easy to win them. The concluding paragraph is touching and somewhat pathetic. "If the way which I have pointed out as leading to this result seems exceedingly hard, it may, nevertheless, be discovered. Needs must it be

hard, since it is so seldom found. How would it be possible, if salvation were ready to our hand and could without great labour be found, that it should be by almost all men neglected? But all things excellent are as difficult as they are rare" (Elwes, pp. 270, 271). He has not made it easy for the reader of his philosophy. His geometric method has made the communication of his thought to the reader difficult, and the machinery resists the communion of author with reader. Much is to be learned of him. Even his doctrine of God has in it elements of value for theists. His account of the emotions has permanent worth, and his remark that only by emotion can we control emotion is of the highest value, though he seems, in his zeal for the dominance of knowledge, to forget the place of emotion in life. Yet this is recognised again in his doctrine of the intellectual love of God, however inconsistently he may have brought it in. But the main difficulty in the acceptance of his teaching, from an ethical point of view, is that it is an ethic for philosophers alone. It neglects the common man, it provides no way of making him a man worth saving. The practical problem of life,—how to make bad men good men, how to make the selfish unselfish, may be solved by him, but the solution is on a plane out of the sight of the common man.

Except in the parts which deal with the emotions it cannot be said that the system of Spinoza is an interpretation of experience. The way in which he rules out moral ideals from the scheme of things, the way, too, in which he distinguishes between intellect in man and in God, and yet continues to use the words as if we could attach a definite meaning to the idea of

infinite intellect, makes it impossible for us to know whether he has a meaning. Still further, his attempt to get rid of anthropomorphism must be called a failure, for his limitation of the attributes of God to Thought and Extension is simply anthropomorphic, for these are only human attributes magnified beyond measure, and they are as anthropomorphic as ethical ideas are. Still, after all drawbacks, Spinoza must be reckoned among the great thinkers of humanity. He had a message for man, and by life and speech he gave his message, and it is our business to take from it as much as we find possible for us in these days of ours.

INDEX

ADOLPHUS, Gustavus, 35.
 Analysis, 41, 42, 44.
 Anselm, 75, 81.
 Arabian Philosophy, 11.
 Arguments for the Being of God,
 75 *et seq.*
 Aristotle, 11, 180.
 Augustine, 3, 8, 9.
 Authority, 4, 12.
 Axiom, 65, 66, 170 *passim*.

BACON, 138, 141, 142.
 Beeckmann, 25, 31.
 Being, Spinoza's four Kinds of, 173.
 Berkeley, 51, 54.
 Boyle, 143.
 Bradley, 54.
 Brahé, Tycho de, 16.
 Bruno, 137.
 Burgh, Albert, 140.

CAUSALITY, 70, 71, 73, 76, 163
 passim.
 Causes, Final, 87, 190 *et seq.*, 200,
 201.
 Christina, Queen of Sweden, 35.
 Church, 2-6, 8, 9, 31.
 Circulation of the Blood, 94, 97.
 Cogito, ergo sum, 47, 49, 50, 56,
 57, 64, 148 *passim*.
 Colerus, 144, 145.
 Conatus sese conservandi, 225-228
 et seq.
 Consequent, Reason and, 89, 90,
 164 *passim*.

Conservation of Energy, 114, 122.
 Conservation of Matter, 114.
 Copernican System, 18.
 Copernicus, 16.
 Cordemoy, 130.
 Cosmos, 34.
 Creed, 7.
 Crusades, 15.

DARWIN, 107.
 Descartes, his Problem, 8; his
 Family, 22; his Birth, 22; his
 Education, 23, 24; his Wander-
 ings, 25; Residence at Breda, 26;
 his Friends, 28; Residence in
 Holland, 29; his Visit to Sweden,
 35; his Death, 36; his Method,
 38 *passim*; *Cogito, ergo sum*, and
 the use of it by Descartes, 56 *et*
 seq.; his Statement of the Argu-
 ment of the Existence of God, 76
 et seq.; his Doctrine of Mechan-
 ism, 92; his Treatment of Final
 Causes, 87; his physical Philo-
 sophy, 111 *et seq.*
 Determinism, 201 *passim*.
 De Witt, 145.
 Dörner, 148.
 Du Bois-Reymond, 106.

EDWARD, Jonathan, 144.
 Effect, Cause and, 76 *passim*.
 Elector Palatine, 144.
 Empiricism, 53.
 Entia rationis, 177.

- Error, Descartes' idea of, 83 ;
 Spinoza's idea of, 177 *et seq.*
 Evolution, 118.
- FAITH and Knowledge, 18.
 Fichte, 54.
 Fischer, Kuno, 18, 32, 45.
- GALILEO, 18, 31, 93.
 Geography, 15.
 Geometry, 41.
 Geulincx, 130.
 God, Argument for the Existence
 of, Descartes', 62, 81 ; Spinoza's,
 169, 188.
 Goethe, 148.
 Good, 229 *et seq.*
 Good and Evil, 177.
 Greek Culture, 13.
- HAMILTON, 78.
 Hegel, 54.
 Herz, 209.
 Hildebrandism, 9.
 Hobbes, 138.
 Humanism, 19.
 Hume, 51, 53, 161.
 Huxley, 95, 97, 106, 125.
- IMMORTALITY, 238, 239.
 Induction, 44.
 Innate Ideas, 56.
 Intellectual Love of God, 236.
- JACQUIER, 32.
 Jesuit Editors of Newton's *Principia*, 32, 33.
 Joël, 37.
- KANT, 17, 44, 54, 92, 125, 209-211.
 Kelvin, 124.
 Kepler, 17.
 Knowledge, Spinoza's three Kinds
 of, 217.
- LAPLACE, 125.
 Leibniz, 54, 122, 145.
 Le Seur, 32.
 Lessing, 148.
 Locke, 54.
- Lumen naturale*, 67.
 Lyell, 122.
- MAIMONIDES, 133.
 Malebranche, 131.
 Mansel, 78.
 Mathematics, 38, 40, 41.
 Maxwell, Clerk, 212.
 Mechanism, 111 *et seq.*
 Mersenne, 31.
 Method, Rules of, 38, 49, 149.
 Middle Ages, 1, 2, 8, 9.
 Motion, Laws of, 112.
 Mysticism, 9, 10, 134.
- NATURA NATURANS* and *Natura naturata*, 197.
 Newton, 16, 32, 61, 113, 119, 122.
 Nominalism, 10.
- OCCASIONALISM, 130 *passim*.
 Oldenburg, 141, 143.
 Organism, 108, 109.
 „ and Environment, 108.
- PHILO-JUDÆUS, 133.
 Pleasure and Pain, 226 *et seq.*
 Pollock, Sir Frederick, 146.
 Polo, Marco, 15.
 Polytheism, 5.
 Ptolemy, 16.
- REALISM, 10.
 Reality, Objective, 114.
 Reformation, 12, 19, 20.
 Renaissance, 12-15, 20, 134.
 Repentance, 227.
 Romanist, 34.
 Royal Society, 143.
- ST. PAUL, 182.
 Schiller, 148.
 Schleiermacher, 132, 148.
 Schopenhauer, 54.
 Scholasticism, 7, 11.
 Scholastic System, 21.
 Self-consciousness, 43, 49, 86.
 Self-determination, 85.
 Spencer, Herbert, 54, 78, 118.

- Spinoza, a Jew, 130; his Birth, 136; his Education, 137; Rupture with the Synagogue, 138; Residence at Rhynsburg, 140; at Amsterdam, 141; Preparation of his Works, 143; Offer of a Professorship, 144; his Manner of Life, 145, 146; his Death, 148; *De Intellectus Emendatione*, 149 *et seq.*; *Exposition of the Cartesian Philosophy* and the *Cogitatio Metaphysica*, 167 *et seq.*; the *Ethics*, the First and Second Books, 187 *et seq.*; the last Three Books, 205 *et seq.*
 Substance, 72 *et passim.*
- Sub specie æternitatis*, 236-238 *et passim.*
 Synthesis, 42.
- TAIT, Professor, 113-116.
 Teleology, Descartes', 107.
 Theology, 2.
 „ Greek, 2.
 „ Latin, 2.
- UNDERSTANDING, Spinoza's Properties of, 221, 225 *et seq.*
- VAN VLOTEN, 159.
- WARD, Dr. James, 109, 110, 204.

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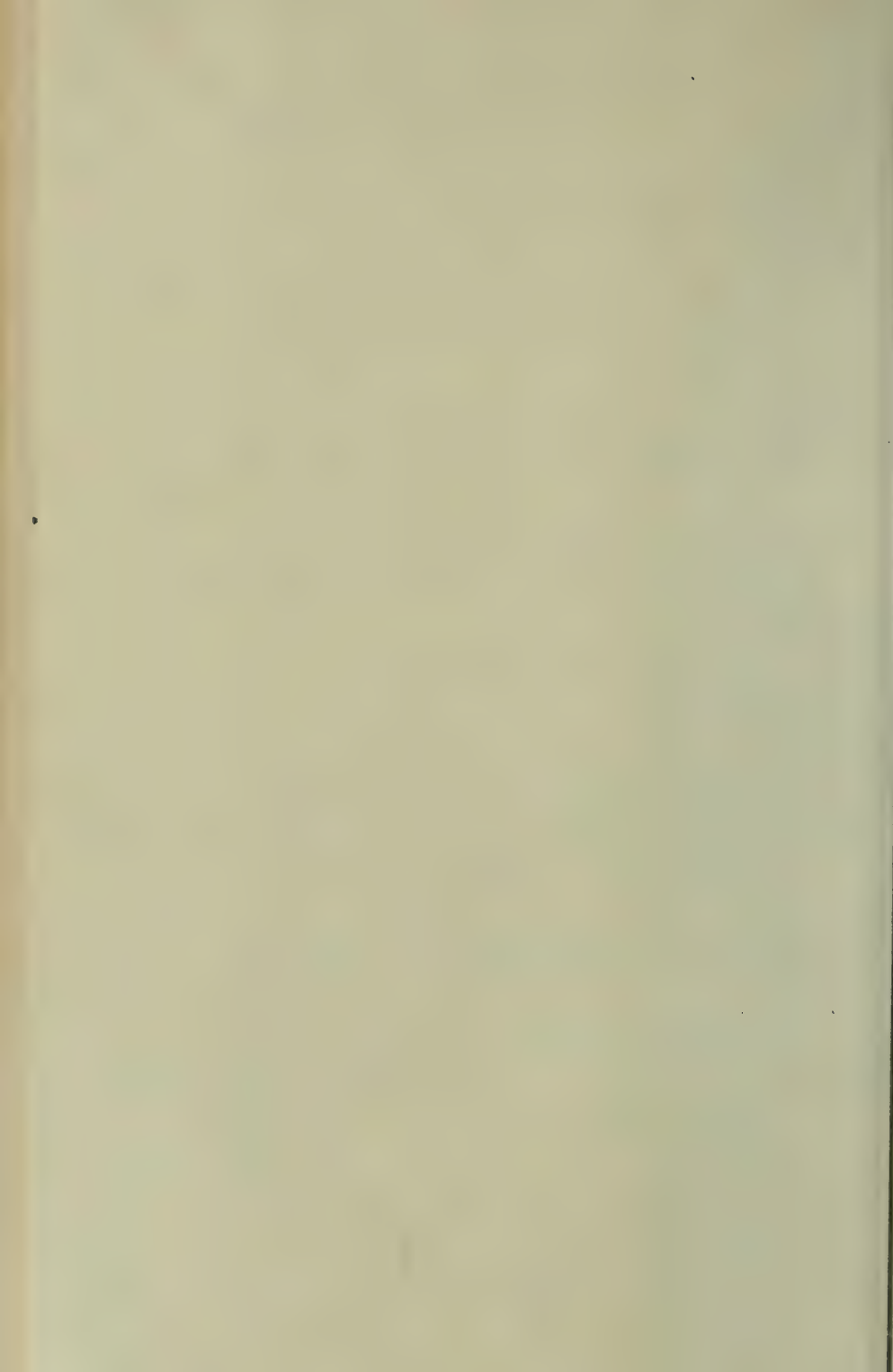
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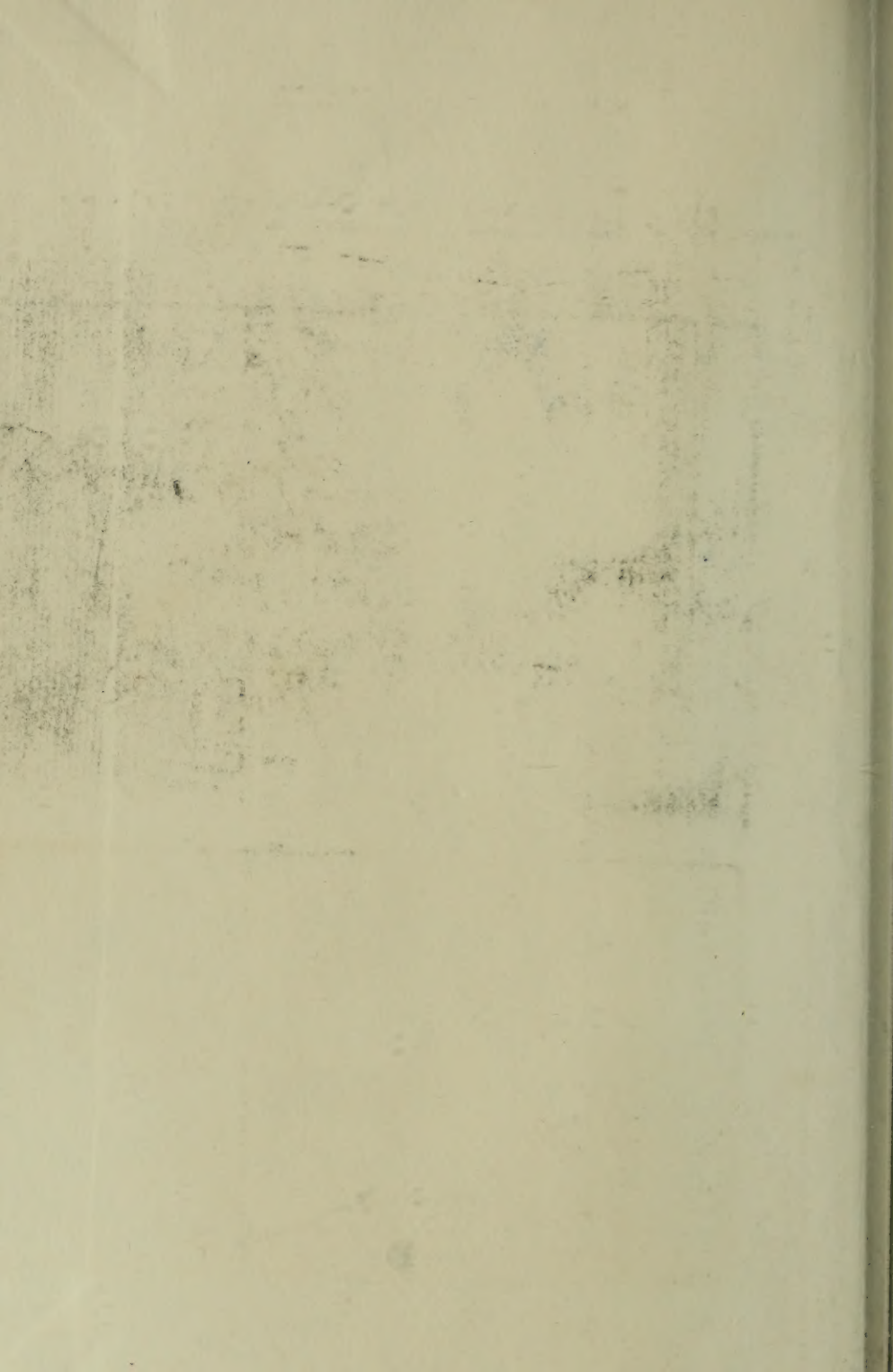
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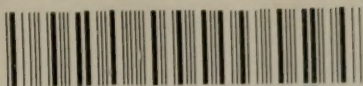
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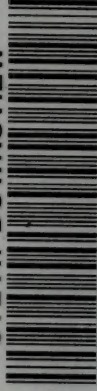
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